Robert W. Allen, Forester

6221 Sly Park Road Placerville, CA 95667

Phone 530 644-4838 Fax 530 644-4838

Forest Management Plan for Angulo, Kuhl and Fox Property

The following is a forest management plan for a portion of Section 16 and a small portion of Section 21 T12N R14E MDM. The El Dorado county assessor's Parcel Numbers are 011-030-45 and 46. This 214.17 acre ownership is located on the west slope of the Sierra Nevada, approximately 24 air miles northeast of Placerville, CA. Topographic map coverage is provided by the Robbs Peak, Calif. 7.5' Quadrangle. The elevation of the property ranges from approximately 4,880 feet to 5,080 feet. Soils in the area are mostly Pilliken coarse sandy loam with areas of Aquepts and Umbrepts. Pilliken soils are deep and well drained, formed from material weathered from granitic rock. This soil is moderate to high site quality. This soil is used mainly for timber production and also for summer range. The Aquepts and Umbrepts are very poor to poorly drained soils that formed in alluvial material located on broad valley flats and along drainages and the periphery of these areas. The Sedge-Rush series typically occurs on these soils, along with willows, alders and other riparian vegetation. These areas are well suited for intensive use as summer range. The property is located in the Union Valley Reservoir Watershed, Calwater ID v2.2 #5514.340301. There are two main watercourses that are tributaries to Union Valley reservoir. These watercourses are unnamed on the Robbs Peak 7.5' Quadrangle Map. The watercourse flowing through the Angulo parcel is named Jack's Creek by the family since it flows through Jack's Meadow and the watercourse flowing through the Fox and Kuhl parcel called Timothy Creek since it flows through Timothy Meadow.

Ownership History: Rufus and Sarah Swift purchased the full ranch on 1/7/1941. That interest passed to their heirs in an 11/21/1994 grant deed. The Angulo Dynasty Trust received their interest on 12/27/1995. The Phyllis Swift Fox Family Revocable Trust received theirs on 6/13/1995. Michael Kuhl received a 1/3 interest on 12/28/1994, and a 2/3 interest on 2/22/2005.

Timberland Preserve Zone (TPZ) Chapter 17.44.070 (Prior Code 9432) requires a plan for forest management to include a discussion and recommendations on at least the following items:

1. Commercial harvesting, a history of past operations and recommendations for the future.

The property being discussed in this report and the surrounding property has a long history of timber harvesting as well as homesteading and ranching dating back to the 1800's. The majority of the land in the immediate vicinity of the subject property is currently managed for timber production by Sierra Pacific Industries and the U.S. Forest Service for multiple use as well as smaller parcels which have been harvested for timber under approved Timber Harvest Plans approved by the California Department of Forestry and Fire Protection. Land owned and managed for timber production by Sierra Pacific Industries was once owned and managed by

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Michigan-California Lumber Company from the late 1800's to the mid 1990's. Michigan-Cal exercised their timber rights on subject property in 1958. Family members remember Rufus and Sarah Swift harvesting more timber, sometime during the 1960s, but remember no details. The most recent timber harvests were in 1994 on the Fox portion and extending through 1997 for the Kuhl and Angulo portion. The Fox portion was harvested under THP #4-94-56 and the Kuhl/Angulo portion under THP #4-94-107/ELD-45. There has been no harvesting since then. A salvage operation was considered in 2008, when the bottom dropped out of the log market. Of the 214 acres, approximately 47 acres are in meadow/grassland. The remaining land is mixed conifer, site class I and II, with White Fir the predominate species. Current growth is estimated to be 600 to 800 bd. ft./acre/yr. This could potentially be improved to 1,000 to 1,200 bd. ft./acre/yr following a series of growth improvement harvest and achieving fully stocked stands.

Recommendations: Until an economically feasible log market returns, it is recommended that the landowners work with a portable sawmill owner-operator to salvage dead and dying trees before they become unmerchantable and either a safety hazard or become large fuel material. The rough lumber can be marketed through the internet or classified ads.

When the market rebounds, a commercial timber harvest including removal of recently dead, dying and diseased trees should be done every 20 to 25 years on the property. It should also include a light selection harvest of green trees of all ages, sizes and species to create a multiple aged stand consisting of mixture of species which can maximize the growth potential on the property. The residual trees in the mixed conifer stand should be left at 15 to 25 foot spacing depending on the age and size. Older snags that do not pose a safety hazard to the landowners or the improvements should be left for wildlife purposes, as they provide habitat for birds and cavity nesting animals. Intermediate harvests to remove dead dying or diseased trees should be done as needed.

The elevation of the property is ideal for white firs which can be grown and sold for Christmas trees. Existing White Fir thickets can be thinned and pruned with Christmas tree sales in mind. Fast growing well spaced trees can be retained for future timber crop trees where managing for Christmas trees.

The meadow/grasslands should not be planted to trees as they provide habitat for a diversity of wildlife species and acts as a filter buffer for water runoff retaining a high level of water quality. Small conifer trees encroaching on the meadows/grassland areas can be removed by weed eating or hand pulling. Advanced regeneration can be cut and piled for wildlife habitat.

2. Provisions for legal and physical access to the property so commercial operations can be carried out.

Physical access to the property is east from Placerville on Highway 50 to Ice House road, a surfaced county/SMUD/USFS maintained road. Ice House Road is approximately 8.4 miles east of the Sly Park Road exit at Pollock Pines. The route continues northeast up Ice House Road approximately 19 miles to Union Valley Road, formerly known as Wolfe Creek Road. Union Valley Road is a co-op road between Sierra Pacific Industries and the U.S. Forest Service heading in a westerly direction that is surfaced for approximately 0.7 miles, then rock and native surface road for approximately 1.4 miles. The route continues on road 12N30 approximately 0.2 miles to the northeast corner of the Kuhl property or on an unnamed road approximately 0.3 miles to the northeast corner of the Fox property.

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Commercial use of Union Valley Road and the short spur roads require a road use permit from the U.S. Forest Service. The application for the permit should be submitted to the Pacific Ranger District of the El Dorado National Forest for their review and recommendations before it is passed along to the El Dorado National Forest Supervisors Office.

3. A reasonable attempt to locate the boundaries of the property and attempts to protect his property against trespass.

Landowner Michael Kuhl and RPF have located all survey monuments required to run boundary lines. The most recent check of the survey monuments surrounding the property was done in the fall of 2008. The boundary lines of the property have been identified at one time or another for previous harvest operations, including interior lines separating the three proposed parcels. The portion of the property boarding U.S. Forest Service managed land has been blazed with the blaze marks painted red, excluding the 200 foot strip of U.S. Forest Service managed land between the high water mark for Union Valley Reservoir and subject property. The survey corners that delineate the 200 foot buffer strip for Union Valley Reservoir have been flagged and are generally close enough to be seen from one to the next. The landowners have attempted to hide these survey monuments to prevent vandalism from lake users.

The two access roads are gated with fences extending to the sides to reduce access to Off Road Vehicles. U.S. Forest Service padlocks are used in addition to private locks in case emergency access is required. There are fences on three portions of the property. The oldest is the fence along two points of the northern edge of the Fox parcel. Next is a fence along much of the western most edge of the Angulo parcel. And then there is the fence started this summer along the western edge of the Angulo and Kuhl boundary of the lower meadow.

Besides the gates and fences that block illegal access to the property by vehicles, frequent visits to the property by the landowners and selected guests attempt to protect the property against trespass.

Private Property and No Trespassing signs have been posted near the gates. It is recommended to provide more signage to inform the public that this is private property. The use of signs is allowed for under chapter 17.44.030 J and K.

4. Disease and insect control work.

The property was surveyed for possible insect or disease problems during the summers of 2008 and 2009. No serious outbreaks were observed but some mortality was observed mostly in the White fir component. Bark beetles have killed some trees in the stand. To minimize the potential for tree loss, diseased trees and the weakest trees should be removed during timber harvest operations, and adequate tree spacing will minimize the competition for light, water and nutrients. There is a small amount of dwarf mistletoe in some of the pines and firs on the property. It does not occur in large enough concentrations to cause major problems but should be removed from the stand to minimize its spread during commercial timber harvest operations. An attempt to harvest the mortality was made in 2008, but the cost of road maintenance and logging costs prevented harvesting because of the lack of markets for the logs. The use of a portable sawmill to process this material is being considered if a market can be found for the lumber.

5. Thinning, slash disposal, pruning and other appropriate silvicultural work.

Thinning: Periodic thinning of seedling and sapling size trees should be done to promote the most rapid growth on the healthiest trees. Larger trees will be thinned during the commercial harvest, and future thinning should be timed with commercial harvest in order to get an economical return on those trees large enough to be merchantable.

Slash disposal: In areas of recreational use by the landowners and guests and near roads, slash and forest debris can be unsightly, hazardous and be a fire hazard. Annual maintenance will prevent the buildup of forest debris in high use areas. Any future THPs should include provisions for slash treatment. Logging slash can be piled and burned or physically moved to areas away from high use areas and used for erosion control. Logging slash spread out on skid trails or other areas of exposed soil can reduce erosion by reducing raindrop impact on granitic soils and by catching sediment that may be transported across the soil surface.

<u>Pruning:</u> Pruning for log quality is not appropriate for this timber stand and with the current economy would not be justified. Pruning is appropriate in the high use areas and along roads to improve aesthesis and to create a break in forest fuels for fire hazard reduction.

6. A fire protection plan including a fuels management program.

<u>Purpose</u>: to reduce the potential of wildfires starting on the property and to slow the rate of spread in case of a wildfire.

To reduce the potential of a wildfire, the landowners shall comply with all California Department of Forestry and Fire Protection and U.S. Forest Service fire rules and regulations and implement a fuels management plan. A fuels management plan to reduce fuels will also assist fire suppression efforts by slowing the rate of spread of a wildfire. Establishing a fire reporting system will also assist local fire authorities by improving reaction time.

Forest fuels management:

Ground fuels consist of natural limb pruning and needle cast, trees dying and falling over, logging slash and ground cover vegetation and brush. Ground fuels should be treated within 100 feet of roads and 150 feet of high use areas. Treatment could include removal, pile and burn or chip and scatter. During timber harvest operations, trees should be felled away from roads and high use areas. Logging slash should be removed from all areas within 100 feet of the edge of roads and 150 feet from high use areas and structures. This slash can be piled and burned or moved to areas away from the roads and high use areas. Treatment of logging slash should be discussed in harvest documents as part of hazard reduction.

Ladder fuels are smaller trees and lower dead and live limbs on larger trees which can provide a ladder for fire to climb from the ground to the crowns of trees. Ladder fuels can be reduced by limbing up the larger trees for 10 feet above the ground, but no more than 50% of the live crown for trees less than 20 feet in height. Small trees growing in the understory should be thinned so the spacing is such that the crowns do not touch and also leaving room for the residual tree crowns to grow without touching for a period of 5 to 10 years.

Crown fuels are the canopies of trees which can carry a fire in high winds and low moisture conditions. It usually occurs where there is a continuous layer of limbs and needles in interlocking tree crowns. Prevention of crown fires can be done by spacing out the larger trees so there is a minimum of 15 feet between crowns and removal of ladder fuels. The spacing of larger trees should be done by the RPF while marking harvest trees in preparation of a commercial logging operation.

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<u>Fuel breaks are gaps in the forest fuels where a fire can be stopped. The dirt roads and high use areas within the property that have been treated for fuel reduction as discussed above and the wet meadows provide adequate fuel breaks for this property.</u>

Water sources for firefighting: The closest source for large trucks is a constructed water hole used for dust abatement during commercial harvesting operations. This water hole is located along Union Valley Road approximately 1.5 miles from the north side of the property. When Union Valley Reservoir is full, water trucks could draft from the reservoir in emergency situations. Union Valley Reservoir would also be the source of water for helicopter equipped with buckets. Water from the watercourse flowing along the eastern portion of the property has been diverted by a man made ditch to provide domestic water to all three parcels. This ditch feeds two 600 gallon water tanks on the Fox parcel and a 525 gallon water tank on the Kuhl parcel located near the high use areas. A 2,500 gallon water tank is planned to be functioning sometime during the summer of 2010 for the Kuhl parcel.

A water system has been developed at the high use areas and can be used for initial response to small fires. Fire reporting system: With the popularity of cell phones and the increase of coverage in remote areas, emergency phone numbers should be posted at the high use areas and on any structures. Guest visiting the property should be made aware of these numbers when first arriving.

Emergency vehicle access: U.S. Forest Service padlocks should remain on all gates providing access to the property. All roads within the property shall remain open and wide enough for fire trucks with occasional wide areas for turning around.

7. Erosion control on existing roads and skid trails and maintenance of existing roads.

<u>Union Valley Road and the short spur roads from Union Valley Road to the property are under</u> the control of the U.S. Forest Service.

The native surface roads within the property are located on flat or gentle slopes and had erosion control structures constructed following the most recent harvest. Landowners should conduct periodic inspections and maintain and repair any damage to the existing erosion control structures on the roads to insure proper drainage by cleaning out the throats of all water bars and drainage areas and make sure runoff is onto non erodible material or into native vegetation for filtration before entering a watercourse. Skid trails were water barred according to the Timber Harvest Plan specifications and Forest Practice Regulations following the last harvest and the trails have stabilized since then with native vegetation and forest litter.

Requirements for erosion control on skid trails and roads following future timber harvests will be specified in the harvest documents. Following the Forest Practice Regulations for any future timber harvest swill reduce to insignificant any impacts to soil or sediment movement.

Existing road crossings of watercourses have permanent culverts in place. These culverts have withstood 100+ year storm events. These culverts should be inspected and maintained to function properly each spring and fall and following any major storm event during the summer. If equipment is used on the property in projects not related to timber harvesting, they should not be operated within 25 feet of seasonal watercourses, within the wet meadow area or within 75 feet of the class I watercourses. Where watercourses are crossed by equipment, and there is a potential for soil to be washed into the watercourses, exposed soils should be protected from erosion by spreading clean straw or forest litter on the soil surface to a depth of two inches.

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8. Planting of a significant portion of the under stocked areas of the land.

The under stocked portions of this property are meadows and grassland and should be managed to remain meadows and grassland.

The timbered portion of the property is adequately stocked with mixed conifers. Small opening created by natural events or by harvesting insect and disease trees will fill in by local seed fall. Logging operations usually expose soft soils which create good seed beds for natural regeneration.

9. Structures

There is currently one structure on the Kuhl parcel. Chapter 17.44.050 allows for one owner or caretaker occupied single-family detached dwelling or a mobile home on an approved foundation. It is recommended that out buildings be constructed on the three parcels for the storage of equipment necessary for the management of the property as well as fire fighting tools and equipment.

Maps:

Exhibit A: Ownership map with roads prepared by James Nicklos, April 1994 Timber Type Map prepared by James Nicklos, March 1991 Aerial Photograph, July 1986

Management plan prepared by:

Robert W. Allen, RPF #2108

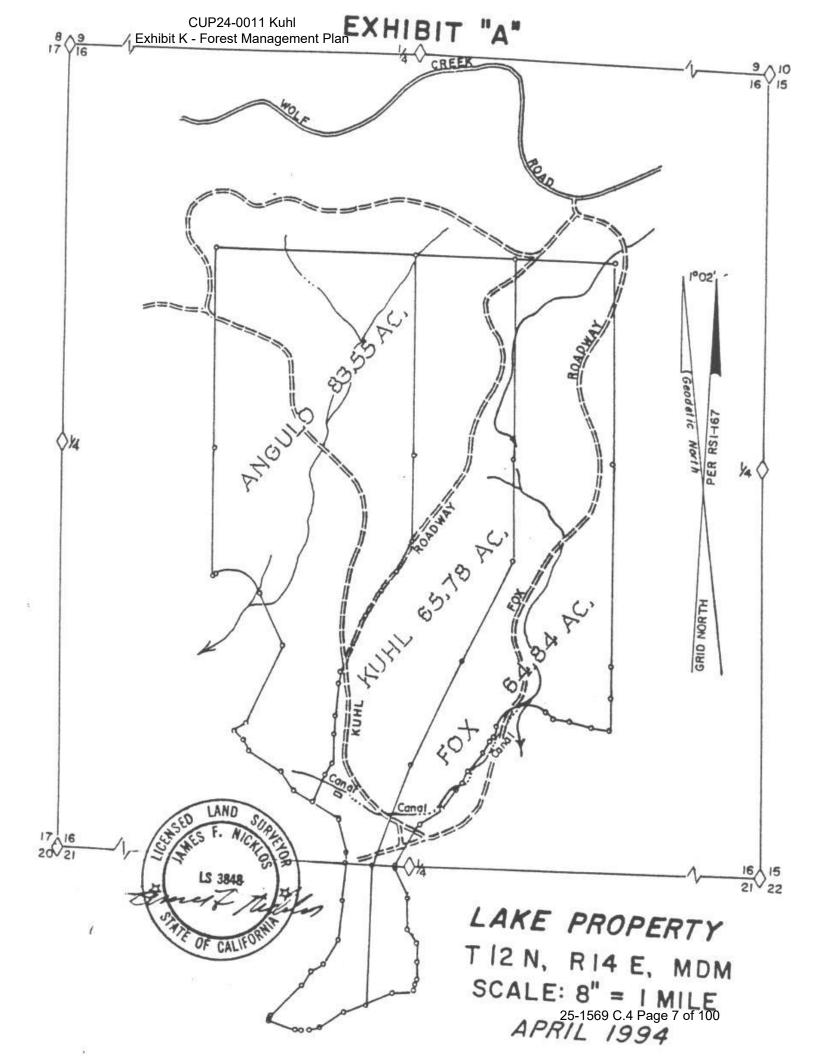
December 2, 2009

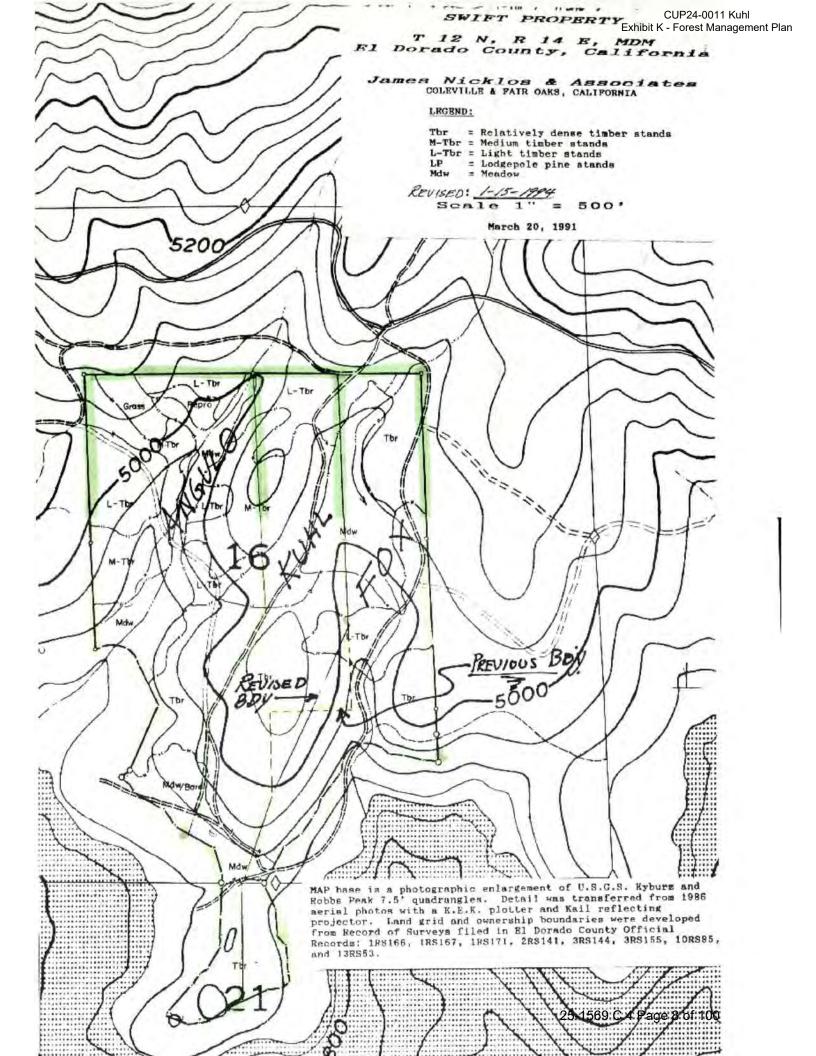
I have read and agree with the above Forest Management Plan

Penny Hocking

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Tony Angulo







CUP24-0011 Kuhl Exhibit L - Memo May 16, 2025 (Fred Buhlert, Registered Professional Forester)

Fred Buhlert Registered Professional Forester #2536 1680 Quarry Road Placerville CA 95667 530-409-9149

May 16, 2025

RE: Conditional Use Permit #24-0011 Kuhl ~ Parcel #011-030-055 & #011-030-058

To Whom It May Concern:

In 2012, myself and an associate prepared the Timber Harvest Plan #4-12-020-ELD on the parcels referenced above where the Conditional Use Permit #24-011-Kuhl is proposed. I was involved in and had direct oversight of the logging of these parcels in 2014 and 2017. Due to these timber harvests, I am very familiar with this timberland and can definitely certify that the proposed project complies with the EDC General Plan 8.4.2.1 (A.) "The proposed use will not be detrimental to that parcel or to adjacent parcels for long-term forest resource production value or conflict with forest resource production in that general area." The proposed project is also compatible with the El Dorado County Zoning Ordinance Sec. 130.40.350 Timber Production Zone, and will not detract from this land's ability to produce timber.

I have continued to do annual inspections of this timberland to assess the health of the timber stand, and I have maintained contact with the landowner, Michael Kuhl.

Fred Buhlert RPF #2536 CUP24-0011 Kuhl Exhibit M - Biological Report

BIOLOGICAL REPORT KUHL RESIDENTIAL STRUCTURE CONSTRUCTION PROJECT

Prepared by:



Sierra Ecosystem Associates

1024 Simon Drive, Suite H Placerville, CA 95667

For:

Michael Kuhl APN: 011-030-058, 011-030-055

DRAFT REPORT

JULY 31, 2024

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1.0 PROJECT DESCRIPTION

The residential structure construction Project (Project) involves building a proposed residential structure, septic area, fire hydrant, a turnout, and solar arrays. The property already has an existing shed, driveway, well, water tank, and roads. The Project area is shown in Figure 1.

1.1 Project Setting

The Project is located on the north shore of Union Valley Reservoir at approximately 5,000 feet elevation. The Project area consists of mostly upland mixed conifer with a meadow to the west and a meadow on the eastern boundary 2,000 feet to the north of the proposed construction site. The meadows are fed by snowmelt in the spring and groundwater throughout the summer and fall and flow into Union Valley Reservoir. The overstory consists of fir and pine species with a mix of incense cedar, black oak, and Douglas fir. A complete species list is shown in Appendix B.

Figure 1. Residential Project Site Proposed Building Location Existing Structure **Residential Construction** Project Area **Project Sea Project Area** Sierra Ecosystem 125 250 500 Feet **Biological Report** Date: 7/24/2024 Associates

2.0 METHODOLOGY

Development of this biological report involved: 1) a desktop evaluation, and 2) a field survey. The methodology for each is described below.

2.1 Desktop Research

Prior to the site visit, preparatory desktop research work was completed using Site Plans and parcel boundaries provided by El Dorado County and high-resolution imagery (dated June 2024). A review of current databases maintained by CDFW was also performed to identify special-status species that could occur on the Project site (CDFW 2024). The CNDDB search covered a 5-mile radius around the Project site and is shown in Figure 2. Table 1 summarizes the species identified in this focused query.

Figure 2. CNDDB Search

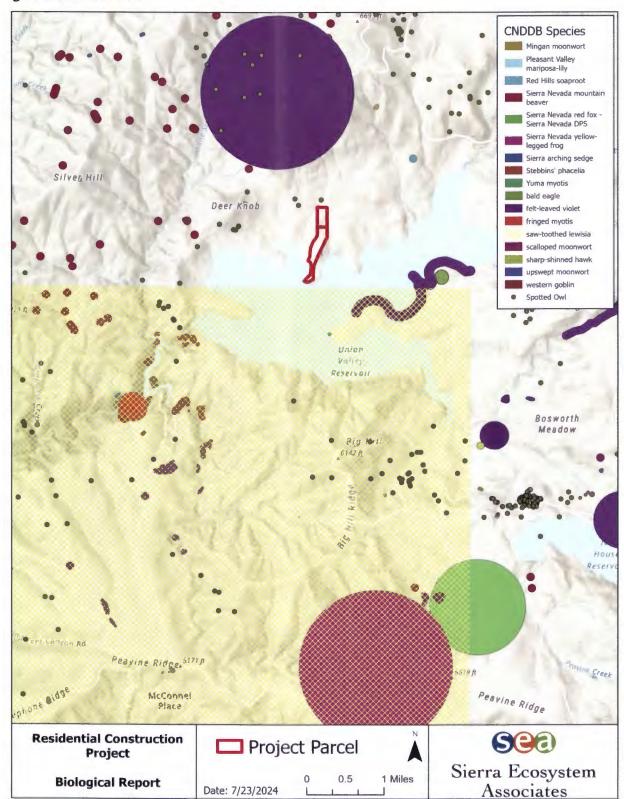


Table 1. CNDDB Species

Common Name	Scientific Name	Federal Listing	California Listing	Rare Plant Rank	CDFW Status
bald eagle	Haliaeetus leucocephalus	Delisted	Endangered		
Sierra Nevada yellow- legged frog	Rana sierrae	Endangered	Threatened		Watchlist species
Sierra Nevada mountain beaver	Aplodontia rufa californica	None	None		Species of special concern
Mingian moonwort	Botrychium minganense	None	None	4.2	
Pleasant Valley Mariposa lily	Calochortus clavatus var. avius	None	None	1B.2	
Red hills soaproot	Chlorogatum grandiflorum	None	None	1B.2	
Sierra Nevada Red Fox	Vulpes vulpes necator pop. 2	Endangered	Threatened		
Sierra arching sedge	Carex cyrtostachya	None	None	1B.2	
Stebbins phacelia	Phacelia stebbinsii	None	None	1B.2	
Yuma myotis	Myotis yumanensis	None	None		
Felt leaved violet	Viola tomentosa	None	None	4.2	
Saw toothed lewisa	Lewisia serrata	None	None	1B.1	
Scalloped moonwort	Botrychium crenulatum	None	None	2B.2	
Upswept moonwort	Botrychium ascendens	None	None	2B.3	
Western goblin	Botrychium montanum	None	None	2B.1	
Spotted owl	Strix occidentalis	None	None		
Fringed myotis	Myotis thysanodes	None	None		
sharp-shinned hawk	Accipiter striatus	None	None		Watchiist species

2.2 Pedestrian Field Survey

Sierra Ecosystem Associates, Inc. (SEA) staff Senior Ecologist, Jeremy Waites, Environmental Scientist Summer Abel, and Assistant Environmental Scientist Aria Pauling completed a pedestrian field survey on June 20, 2024 and June 21, 2024. The survey consisted of a floristic botanical survey, nesting raptor and migratory bird survey, and habitat analysis of the Project site. The focus of the survey was to analyze habitat characteristics and to assess if any threatened, endangered, or special status (TES) plants or animals would be affected by Project activities. The Project area including the proposed building location was surveyed and all plant and animal species observed were recorded. Pictures were taken of plant occurrences as well as the overview of the site and are included in Appendix A. A wetland delineation was also completed to map the existing wetlands within or near the Project site.

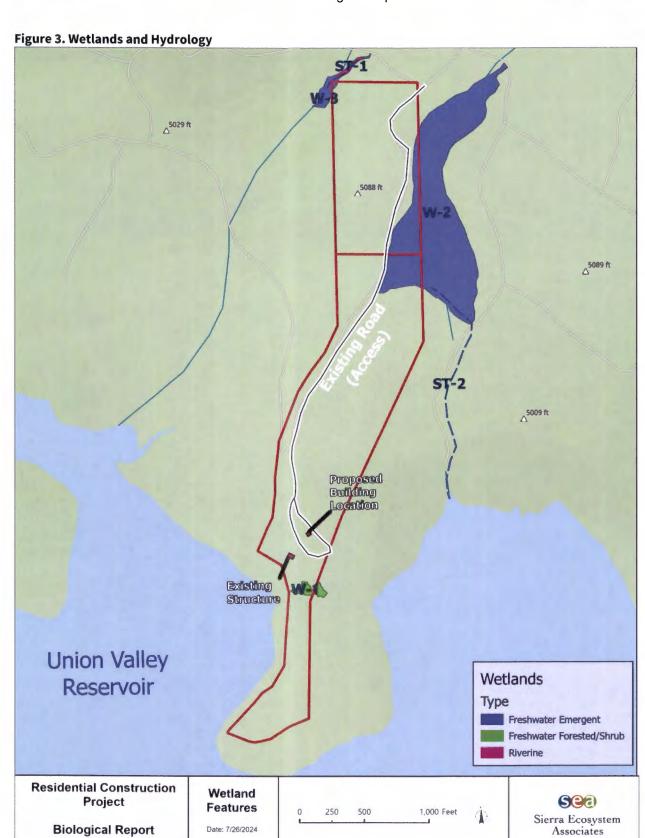
3.0 RESULTS BASED ON DESKTOP EVALUATION AND SURVEY

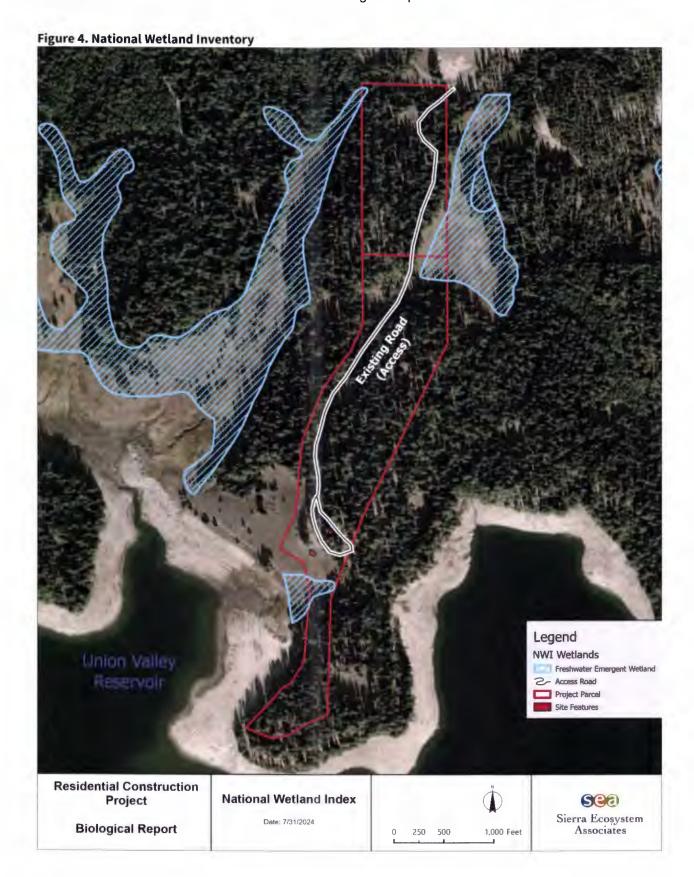
The following sections describe the information that was gathered from the desktop searches and the June 2024 field survey. These sections also provide details on Project impacts and the specific habitat characteristics for potential TES species that are present in the vicinity of the Project site. TES species, which are listed in Table 1, are plants and animals that historically occur in the surrounding area and those with potential habitat.

3.1 Wetland Features

The wetland and hydrological features from the National Wetland Inventory and the National Hydrology Dataset (USFWS 2024) are shown in Figure 3. Overland flow is generally from north to south. Two streams (ST-1, ST-2) shown in Figure 3 are on either side of the Project. Both flow through meadows and empty into Union Valley Reservoir.

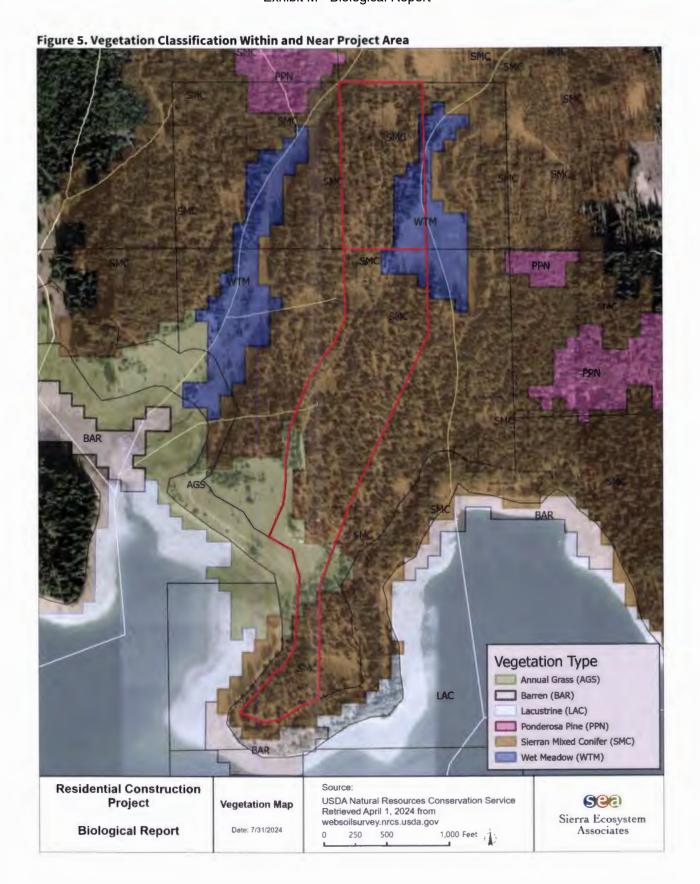
Following completion of the field assessment, delineated features of the wetland differ from those defined by the NWI. NWI wetland data is presented in Figure 4. Specifically, based on the field survey data, the wetlands extend farther and the most southern wetland (W-1) is more complex. W-1 has many wetland plant species, but trends to more upland invasive plant species in the later drier season. The NWI dataset classifies the wetlands within the study area as: Emergent Wetland but also contains Forested Shrub Wetland and Riverine.





3.2 Vegetation Classification

There are numerous vegetation classification schemes for California, which have been developed by various agencies and ecologists for several user groups. The California Wildlife Habitat Relationship (CWHR) system was developed by CDFW to predict the habitat value for vertebrate animal species in California (CWHR 2024). Figure 5 shows the vegetation classification of the Project area according to the CWHR system. Although the data shown in Figure 5 is coarse, the vegetation types displayed are consistent with observations of vegetation types identified during the pedestrian field survey. The Project area mainly consists of Sierran mixed conifer with some wet meadow and annual grass classification.



3.3 Soils

The Project is in the USDA Land Resource Region (LRR) 22A, Sierra Nevada Mountains, which is characterized by hilly to steep mountain relief and occasional mountain valleys.

The NRCS Soil Survey indicates that there are four soil series within the study area (see Figure 6). The following description is summarized from the USDA NRCS Custom Soil Resource Report (NRCS 2024).

Table 2. Soil Series in Study Area

Map Unit Name	Acres in Parcel	Percent of Parcel
Aquepts and Umbrepts 0 to 15 percent slopes	6.95	10.6%
Pilliken coarse sandy loam, 5 to 30 percent slopes	58.83	89.4%

Figure 6. Soils Map Legend Aquepts, Umbrepts and 0 to 15 percent slopes soils Mieruf very gravelly loam, 5 to 30 percent slopes Pililken coarse sandy loam, 5 to 30 percent slopes **Project Features** Project Parcel 2- Access Road **Residential Construction** USDA Natural Resources Conservation Service Retrieved June 1, 2024 from sea Soil Map **Project** Sierra Ecosystem websoilsurvey.nrcs.usda.gov Date: 7/26/2024 Associates **Biological Report** 250 500 1,000 Feet

4.0 DISCUSSION

The following section provides details on Project impacts and the specific habitat characteristics for potential TES species that are present in the vicinity of the CMT treatment sites. TES species, which are listed in Table 1, are plants and animals that historically occur in the surrounding area and those with potential habitat.

4.1 Plants

Mingan Moonwort (Botrychium minganense)

Mingian Moonwort typically grows in soils with high concentrations of lime. The species can be found in or near streambanks, open fields and meadows. Habitat exists in meadows nearby but not within the Project site. Project activities are not likely to cause impacts to this species.

Pleasant Valley mariposa-lily (Calochortus clavatus var. avius)

Endemic to Central California and found on dry, rocky slopes, chaparral, and open fields, typically in elevations less than 4,200 feet. Habitat is poor within the treatment areas with limited bare exposed areas, and at a higher elevation than the species are typically found. Project activities are not likely to cause impacts to this species.

Red Hills soaproot (Chlorogalum grandiflorum)

Red Hills soaproot is found in chapparal, woodland, and forested areas on gabbro and serpentine soils. This habitat is not present within the Project area. Project activities are not likely to cause impacts to this species.

Sierra arching sedge (Carex cyrtostachya)

Sierra arching sedge is found in wet meadows, marshes, seasonally wet outcrops, and riparian margins. Some habitat is present in meadows nearby, with little habitat present within the project area. Project activities are not likely to cause impacts to this species.

Stebbins' phacelia (Phacelia stebbinsii)

Stebbins' phacelia is endemic to Central and Northern California and found in rocky soils in forests and open meadows. Some habitat may be present nearby, but there are not many dry, rocky soils within the Project site to support this species. Project activities are not likely to cause impacts to this species.

felt-leaved violet (Viola tomentosa)

Felt-leaved violet is endemic to central Sierra Nevada and can be found in dry, open, coniferous forests with gravelly soils. Habitat is poor within the Project area with limited bare exposed areas and gravelly soils. Project activities are not likely to cause impacts to this species.

Saw-toothed lewisia (Lewisia serrata)

Saw-toothed Lewisia is found in shady, moist, rocky canyon and ravine walls. This habitat is not present within the Project area. Project activities are not likely to cause impacts to this species.

scalloped_moonwort (Botrychium crenulatum)

Scalloped moonwort is found sporadically in wet environments, including meadows in coniferous forests and subalpine regions, and marshes. They are typically found in elevations between 3,800 and 9,200 ft. Some habitat may exists in nearby meadows, but habitat is poor within the Project area. Project activities are not likely to cause impacts to this species.

upswept moonwort (Botrychium ascendens)

Upswept moonwort is present in Northern California can usually be found in moist environments near riversides or in lowland meadows. Some habitat may exist in nearby meadows, but habitat is poor within the Project Area. Project activities are not likely to cause impacts to this species.

Western goblin (Botrychium montanum)

Western Goblin is found in California usually in moist, dark understories of coniferous forests in soils with a high organic matter content. Habitat is poor within the Project area but exists in nearby meadows. Project activities are not likely to cause impacts to this species.

4.2 Animals

Sierra Nevada mountain beaver (Aplodontia rufa californica)

The Sierra Nevada Mountain beaver is a CDFW Species of Special Concern. Sierra Nevada mountain beavers occur in dense riparian-deciduous and open, brushy stages of most forest types. Typical habitat in the Sierra Nevada is montane riparian with frequent open and intermediate-canopy coverage with a dense understory near water. Deep, friable soils are required for burrowing, along with a cool, moist microclimate (Beier 1989). This type of habitat is present adjacent to nearby meadows. Project activities would not occur near these habitat locations and are not likely to cause impacts to this species.

Sierra Nevada red fox (Vulpes vulpes necator pop. 2)

Sierra Nevad red foxes are found in alpine and barren areas, subalpine forests, red fir forests, lodgepole pine forests, and mixed conifer forest. They are usually found above 7,000 feet. There is little of this habitat present within the Project area, and red foxes are generally found at a higher elevation. Project activities are not likely to cause impacts to this species.

Sierra Nevada yellow-legged frog (Rana:sierrae)

The Sierra Nevada yellow-legged frog is federally listed as endangered and listed as threatened

in California. This amphibian inhabits lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains. Waters that do not freeze to the bottom or dry up are required. It prefers open shorelines that gently slope up to shallows of a few inches (CalHerps 2017). Habitat for this species is very poor in the Project area and most water sources do not stay wet or unfrozen year-round. Project activities are not likely to cause impacts to this species.

Yuma myotis (Myotis yumanensis)

Yuma myotis are found in forests, riparian zones, grassland and deserts. This species also likes to be near rivers, streams, ponds, and lakes. Habitat like this is present in meadows and lakes outside of the Project area but not within the Project area boundaries. Project activities are not likely to cause impacts to this species.

fringed myotis (Myotis thysanodes)

Fringed myotis are typically found in dry environments throughout open grasslands and mature ponderosa, oak and pinyon-juniper forests. There is no habitat near or in the Project area to support this species. Project activities are not likely to cause impacts to this species.

Bald eagle (Haliaeetus leucocephalus)

The Bald eagle is listed as endangered in California. Bald eagles forage in large bodies of water. They typically nest in large trees adjacent to a body of water. Nesting occurrences are common nearby on Union Valley Reservoir as there are large trees and snags that may offer potential nesting sites. No nesting raptors were found during the field survey. Project activities are unlikely to adversely impact this species as no trees are being removed or disturbed.

<u>Sharp-shinned hawk</u> (*Accipiter striatus*)

Sharp-shinned hawk is a CDFW Watchlist Species. Sharp-shinned hawks can be found in mixed or coniferous forests, open deciduous woodlands, thickets, and edges. They usually nest in groves of coniferous or deciduous trees with brush or clearings nearby (Sulivan 1994). The adjacent Jeffrey pine and ponderosa forests surrounding may offer potential nesting sites, but Project activities are unlikely to adversely impact this species.

<u>Spotted owl (Strix occidentalis)</u>

Habitat includes old growth forests and, in California, oak woodlands and forested canyons. The adjacent Jeffrey pine and ponderosa forests surrounding may offer potential nesting sites, but treatment activities are unlikely to adversely impact this species.

5.0 CONCLUSION

No raptors or migratory birds were observed nesting during the field survey. No nests from previous years were observed. No occurrences of threatened, endangered, or other special status species were observed during the field survey.

The CNDDB database search found that most special status plants and animals prefer habitat within meadows or coniferous forests that exist within 5 miles of the Project. Based on the existing conditions of the Project area, there is very little wetland habitat or year-round water to support these species. Some meadow habitat is present nearby but is outside of the Project area. Species that are most likely to occur are nesting raptors and migratory birds. Because project activities do not include the removal of trees or shrubs that provide suitable nesting habitat, and because no evidence exists of current/past nesting in the Project vicinity, neither nesting raptors nor migratory birds are likely to be impacted.

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 [2024, July 24].

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Biological Report

7.0 REPORT AUTHORS

The following individuals prepared the text presented in this analysis.

Sierra Ecosystem Associates

Rick A. Lind Principal-In-Charge – Document Review

Jeremy Waites Arborist/GIS Specialist – Co-author

Summer Abel Environmental Scientist – Primary Author

Rayann La France Administrative Services Manager – Editor and Document Production

Appendix A

Project Photos

Photograph 1. View from the bike trail facing the Project site showing the existing structure



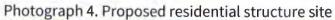


Sierra Ecosystem Associates Biological Report

Photograph 3. View of existing road and septic tanks to be installed



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Photograph 5. Overview of the northeastern wetland



Photograph 6. The stream running through the northwestern part of the Project site



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Appendix B

Species List

Scientific Name	Common Name
Abies concolor	White fir
Abies magnifica	California red fir
Achillea millefolium	Yarrow
Agrostis pallens	Diego bent grass
Agrostis scabra	Rough bentgrass
Alnus incana	Creek alder
Amelanchier utahensis	Pale leaved serviceberry
Anaphalis margaritacea	Pearly everlasting
Apocynum androsaemifolium	Spreading dogbane
Aquilegia formosa	Columbine
Arctostaphylos nevadensis	Pine mat manzanita
Arctostaphylos patula	Green leaf manzanita
Arctostaphylos patula	Green leaf manzanita
ArtemBistorta bistortoides	American bistortisia
Asarum lemmonii	Lemmon's wild ginger
Bromus tectorum	Downy chess
Calocedrus decurrens	Incense cedar
Carex fracta	Fragile sheathed sedge
Ceanothus cordulatus	Mountain whitethorn
Ceanothus integerrimus	Deer brush
Chamerion angustifolium	Fireweed
Chlorogalum pomeridianum	Amole
Cirsium vulgare	Bullthistle
Cirsium vulgare	Bullthistle
Collomia grandiflora	Large flowered collomia
Corallorhiza striata	Striped coral root
Cornus nuttallii	Mountain dogwood
Cornus sericea	Red osier dogwood
Elymus elymoides	Squirrel tail grass
Elymus glaucus	Blue wild rye
Equisetum arvense	Common horsetail

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Erythranthe guttata	Seep monkey flower
Festuca rubra	Red fescue
Fragaria vesca	Wild strawberry
Galium bolanderi	Bolander's bedstraw
Goodyera oblongifolia	Rattlesnake plantain
Hackelia micrantha	Jessica's stickseed
Heracleum maximum	Common cow parsnip
Hieracium albiflorum	White flowered hawkweed
Hordeum brachyantherum	Meadow barley
Hosackia oblongifolia	Narrow leaved lotus
Hypericum perforatum	Klamathweed
Juncus balticus	Wire rush
Lactuca serriola	Prickly lettuce
Lonicera conjugialis	Purpleflower honeysuckle
Lupinus fulcratus	Green stipuled lupine
Madia elegans	Common madia
Monardella sheltonii	Shelton's coyote mint
Pedicularis semibarbata	Pine woods lousewort
Penstemon newberryi	Mountain pride
Pinus contorta	Lodgepole pine
Pinus jeffreyi	Jeffrey pine
Pinus lambertiana	Sugar pine
Pinus ponderosa	Yellow pine
Potentilla flabellifolia	Fan leaved cinquefoil
Pseudotsuga menziesii	Douglas fir
Pteridium aquilinum	Western bracken fern
Pterospora andromedea	Pine drops
Quercus kelloggii	California black oak
Rhododendron occidentale	Western azalea
Ribes nevadense	Mountain pink currant
Ribes roezlii	Sierra gooseberry
Rosa californica	California wild rose
Rumex acetosella	Sheep sorrel
Sambucus mexicana	Elderberry
Senecio integerrimus	Lambstongue groundsel
Senecio triangularis	Groundsel
Sidalcea glaucescens	Glaucous checker mallow
Sisyrinchium bellum	Blue eyed grass
Stipa occidentalis	Common western needle grass
Symphoricarpos albus	Common snowberry
Taraxacum officinale	Red seeded dandelion

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Tragopogon dubius	Goat's beard	
Veratrum californicum	California corn lily	
Verbascum thapsus	Woolly mullein	
Viola purpurea	Goosefoot violet	

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RECEIVED

SEP - 9 2024

Mr. Michael Kuhl

EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

July 31, 2024

Subject:

Environmental Compliance Documentation for the Union Valley Residential Construction

Project

Dear Mr. Kuhl:

Sierra Ecosystem Associates (SEA) is pleased to submit the following environmental compliance documentation for the Union Valley Residential Construction Project:

- Draft Biological Resources Report
- Draft Preliminary Wetland Delineation Report

Please review the attached documents and advise us as to any necessary changes or if you have any questions. If there are no changes to the enclosed or if you have suggested changes, we will finalize the reports for you to submit to El Dorado County.

Thank you for this opportunity to assist you with this Project. Please feel free to contact me if you have any questions on the above or enclosed.

Sincerely,

Jeremy Waites

Jany Want

Attachments:

- Draft Biological Resource Report
- Draft Preliminary Wetland Delineation Report

CUP24-0011

DRAFT

PRELIMINARY WETLAND DELINEATION REPORT

KUHL RESIDENTIAL STRUCTURE CONSTRUCTION PROJECT



Prepared for:

Michael Kuhl APN: 011-030-058, 011-030-055 Prepared by:



Sierra Ecosystem Associates

1024 Simon Drive Placerville, CA 95667

JULY 31, 2024

Residential Structure Construction Project

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Appendix B

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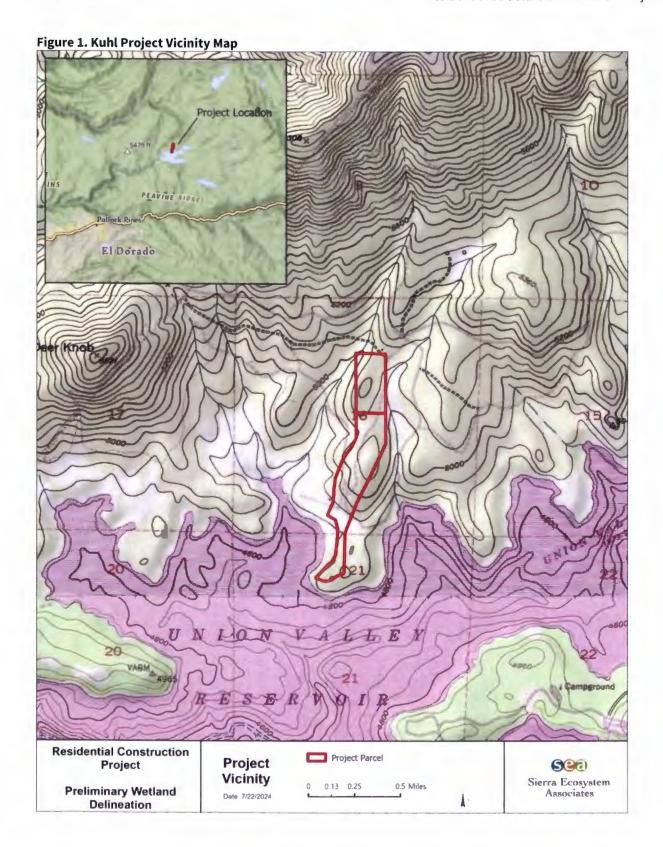
Residential Structure Construction Project

1.0 INTRODUCTION

This document represents a preliminary wetland determination and delineation subject to verification by the U.S. Army Corps of Engineers (USACE). The Preliminary Wetland Delineation (PWD) report describes the existing wetland resources within and near an area identified for a residential construction project on the north shore of Union Valley Reservoir. The PWD consisted of a desktop database review and field data collection in the Project area. The report presents determination of the location of wetland boundaries and includes several maps identifying wetland features of the area including streams and wetlands based on vegetation, soil, and hydrology characteristics.

1.1 Setting

The residential structure construction Project (Project) is located on the north shore of Union Valley Reservoir at approximately 5,000 feet elevation. The Project area consists of mostly upland mixed conifer with a meadow to the west (M-1) and a meadow (M-2) on the eastern boundary 2,000 feet to the north of the proposed construction site. The meadows are fed by snowmelt in the spring and groundwater throughout the summer and fall and flow into Union Valley Reservoir. The overstory consists of fir and pine species with a mix of incense cedar, black oak, and Douglas fir. Figure 1 shows the Project vicinity.

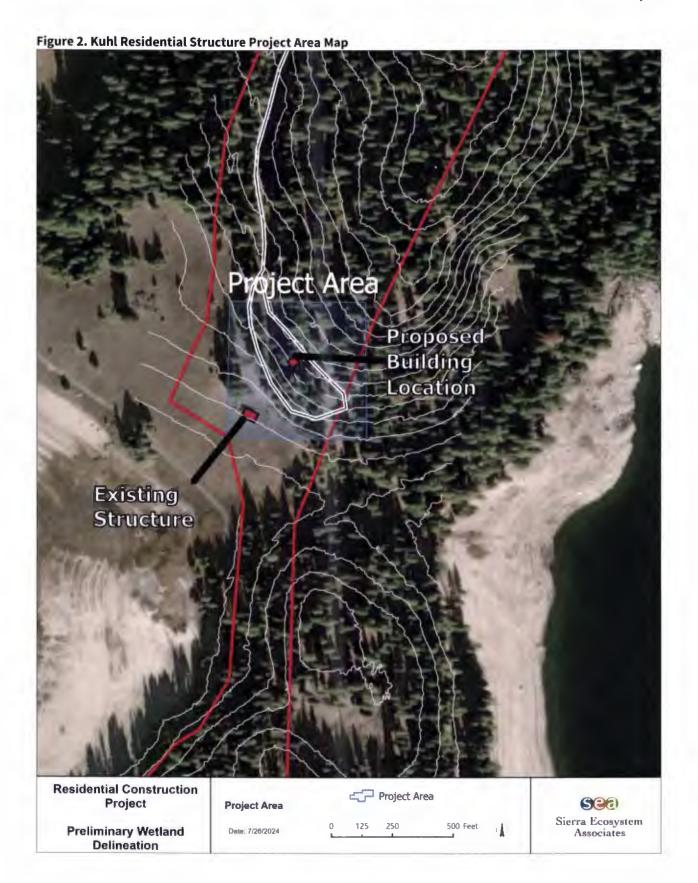


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1.2 Project Description

The Project is to construct a residential structure approximately 250 feet northwest of an existing structure and 50 feet higher in elevation. The locations of the existing structure and proposed structure are shown below in Figure 2. Staging areas will be located outside the Project area and access routes will be on existing roads.



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2.0 METHODOLOGY

This PWD was prepared in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Western Mountains Region (Version 2.0) (USACE 2008). The Study Area was surveyed on June 20, 2024 to gather the necessary soil, vegetation, and hydrology data to prepare the PWD report. Data was collected according to procedures of the above referenced documents for determination of the wetland boundaries and data was collected and entered into the Wetland Determination Data Forms (Appendix A). The Study Area where data collection and field surveys took place is shown on Figure 1 in the Project Parcel. The Project Area outline with the existing structure and proposed building location are defined and shown above in Figure 2.

- Wetland Delineation Study Area (Study Area): Total area of data collection that includes the Project Area and the entire parcel.
- Project Area: Total area where work is planned that is the approximate location of the residential structure construction site.

Sierra Ecosystem Associates (SEA) Senior Ecologist, Jeremy Waites, served as the principal author of the PWD report. Mr. Waites has over 18 years of professional experience completing a variety of biological studies and preparing associated reports and has completed numerous wetland delineations in the Sierra Nevada region.

Observation/data points were composed of paired data collection locations based on field conditions. Each pair of points was placed equidistant from the wetland boundary determined by the indicators at each data point. At each data point, the site was examined for hydrophytic vegetation, hydric soils, and wetland hydrology and recorded on the attached Data Forms (Appendix A). Wetland boundaries, data points and other waters, including streams, were mapped using a sub-meter accuracy GPS unit and are shown in Figure 5.

Vegetation was sampled and quantified at each point by each taxon's percent cover of the observation area and identified to species level wherever possible using the Jepson Manual: Higher Plants of California nomenclature (Hickman 1993) (Jepson eFlora 2024). The 2016 National Wetland Plant List and the U.S. Department of Agriculture (USDA) Plants database were consulted to determine the wetland indicator status for each plant [Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate (OBL)] (Lichvar et al. 2016, USDA NRCS 2024).

Soil pits were dug to a depth necessary to document evidence of hydric soils and examined at each potential wetland and adjacent upland. Each soil sample was moistened before determining texture and color. Soil texture was determined in the field by approximating the percentage of sand, silt, and clay using the USDA soil texture triangle. Soil colors were determined using the Munsell Soil Color Charts (2000). The soils were classified using the USDA soil texture nomenclature as described in the University of Florida Extension Fact Sheet SL-29

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(Brown 2003). Hydric soil indicators described in the Supplemental Manual and the USDA Natural Resource Conservation Service (NRCS) publication of Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils were used to determine if hydric soils are present (USDA 2017).

Wetland hydrology indicators were evaluated at potential wetlands. Determination of the ordinary high-water mark (OHWM) was based on the definition provided in the USACE regulations under the Clean Water Act (CWA) 33 CFR 328.3(e) and the Regulatory Guidance Letter No. 05-05 (USACE 2005). All existing conditions are described in more detail in Section 3.2. Environmental Conditions, and OHWM determinations were based upon direct or indirect evidence as described in both the 1987 Manual and the Supplemental Manual and the Regulatory Guidance Letter No. 05-05.

The following data sources were collected prior to going to the field on June 20, 2024:

- Web Soil Survey (NRCS 2024): The web soil survey was reviewed to determine which soil series have been mapped on-site and whether any hydric soils are present. A Custom Soil Resource Report for El Dorado County California, Digital GIS shapefiles of the mapped soils obtained from the NRCS were downloaded and mapped for the Project.
- National Wetlands Inventory (NWI) [U.S. Fish and Wildlife Service (USFWS) 2024]:
 Digital geographic information system (GIS) shapefiles of existing, mapped NWI wetlands were downloaded from the USFWS Wetlands Geodatabase and mapped for the Project.
- National Hydrography Dataset (NHD) [U.S. Geological Survey (USGS) 2023]: Digital GIS shapefiles of the hydrographic data for the region were downloaded from the USGS NHD Geodatabase and mapped for the Project.
- The USGS 7.5-minute Robbs Peak SE topographic quadrangle map: The quad map was reviewed for existing waters and other potential wetland features or topography that indicated the potential for drainage or ponding.
- Habitat Classification: The habitat was classified by reviewing the Manual of California Vegetation classification scheme and based on knowledge of plant communities in the region (Sawyer and Keeler-Wolf 2009). These vegetation communities can be crosswalked with other vegetation classification schemes as necessary.
- Aerial Photography: National Agricultural Imagery Program (NAIP) 2024 El Dorado County, color, ortho-rectified 0.3-meter pixel resolution: Aerial photography was used to determine coarse locations of wetland boundaries and data collection points.

2.1 Site Assessment

After completing the database review, SEA staff Senior Ecologist, Jeremy Waites, Environmental Scientist, Summer Abel, and Assistant Environmental Scientist Aria Pauling visited the Project area and completed a pedestrian field survey on June 20, 2024. The purpose of the field survey was to collect data that would aid in determining the boundaries of all

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wetlands in the Project area. Data collected during the field assessment and photos of collected samples can be found in Appendix A and Appendix B, respectively.

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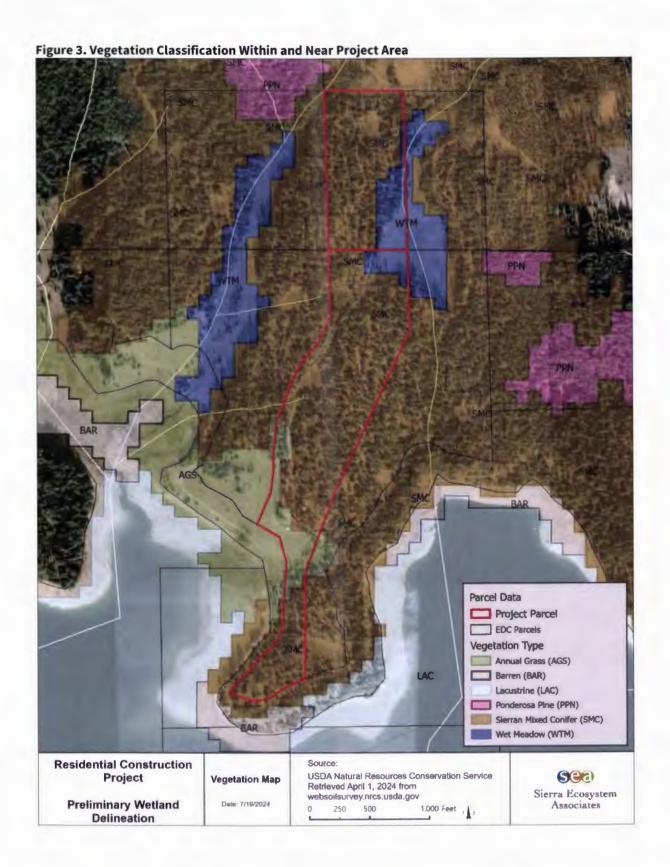
3.0 RESULTS AND DISCUSSION

This section describes the existing environmental conditions including soils, vegetation, and wetland features.

3.1 Habitat Classification

There are numerous vegetation classification schemes for California, which have been developed by various agencies and ecologists for various user groups. The California Wildlife Habitat Relationship (CWHR) system was developed by CDFW to predict the habitat value for vertebrate animal species in California (CWHR 2024). Figure 3 shows the vegetation classification of the Project area according to the CWHR system. Although the data shown in Figure 3 are coarse, the vegetation types displayed are consistent with observations of vegetation types identified during the pedestrian field survey. The following descriptions characterize the four major vegetation types found within the Study area.

- <u>Annual Grassland</u> usually contains perennial bunch grasses such as squirrel tail (*Elymus*), mules ear (*Wyethia*), and sometimes sagebrush (*Artemisia*). Many of these species have been displaced by non-native annual grasses. This is more common at lower elevations.
- Wet Meadow is made up of a large variety of plant species. Those species most common to wet meadows in the north-central Sierra at this elevation include Agrostis, Carex, Danthonia, Juncus, Salix, and Scirpus. Important grass and grass-like species include thingrass, abruptbeak sedge, beaked sedge, Nebraska sedge, tufted hairgrass, needle spikerush, fewflowered spikerush, common spikerush, baltic rush, Nevada rush, irisleaf rush, pullup muhly, and panicled bulrush.
- <u>Sierran Mixed Conifer</u> is defined by vegetation consisting of thinleaf alder, aspen, cottonwood, dogwood, wild azalea, willow, and water birch. Montane riparian is found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Within the Project Area, lodgepole and honeysuckle are common in the upper edges of the meadow.



3.2 Environmental Conditions

The Project is in the USDA Land Resource Region (LRR) 22A, Sierra Nevada Mountains, which is characterized by hilly to steep mountain relief and occasional mountain valleys.

Soils

The NRCS Soil Survey indicates that there are four soil series within the study area (see Figure 4). The following description is summarized from the USDA NRCS Custom Soil Resource Report (NRCS 2024).

Table 1. Soil Series in Study Area

Map Unit Name	Acres in Parcel	Percent of Parcel
Aquepts and Umbrepts 0 to 15 percent slopes	6.95	10.6%
Pilliken coarse sandy loam, 5 to 30 percent slopes	58.83	89.4%

Aquepts Series

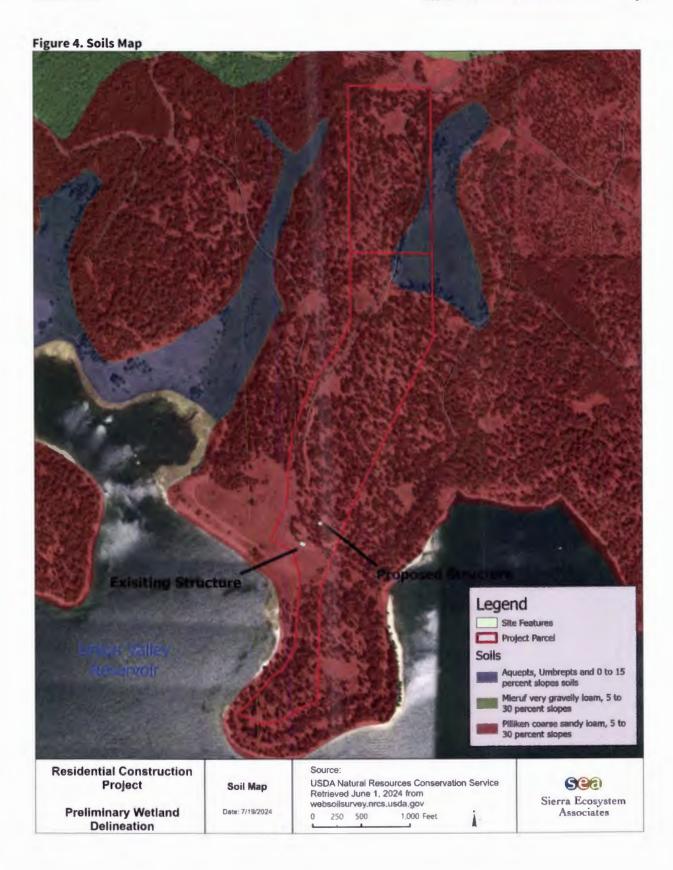
Aquepts are poorly drained or very poorly drained soils that are formed in alluvial material on broad valley flats and along drainages. Slope ranges from 0 to 15 percent. Vegetation is the Sedge-Rush series.

Aquepts and Umbrepts, 0 to 15 percent slopes soils

Pilliken Series

The Pilliken series consists of deep, well drained soils formed in material weathered from granitic rocks. They are on mountainsides with slopes of 5 to 75 percent. Mean annual precipitation is 53 inches and mean annual temperature is 49 degrees F.

• Pilliken coarse sandy loam, 5 to 30 percent slopes



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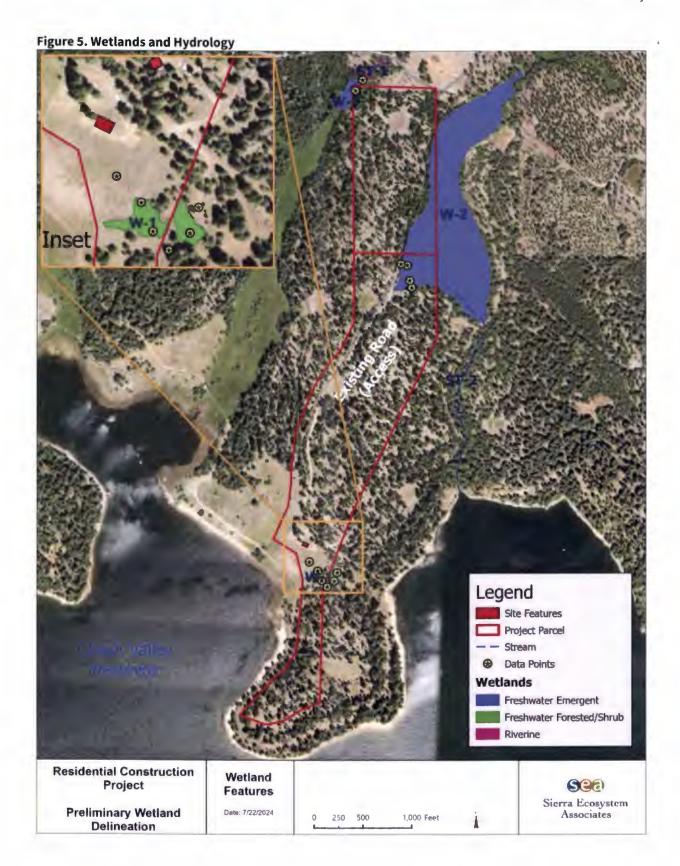
Wetlands and Other Potential Army Corps of Engineers' Jurisdictional Waters

Wetlands are defined as, "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USACE 1987). Wetland habitats occur within the Project Area.

During the site assessment, potential jurisdictional wetlands and waters were mapped based on vegetation indicators, the presence of hydric soils and visible hydrology. Data corresponding to the wetland determination is included in Appendix A. Figure 5 shows the wetlands that exist within and nearby the Project Area.

Deepwater Aquatic Habitats

Deepwater aquatic habitat is defined as, "areas that are permanently inundated at mean annual water depths > 6.6 feet or permanently inundated areas ≤ 6.6 feet in depth that do not support rooted-emergent or woody plant species" (USACE 1987). There is one feature within the study area that meets this definition which is Union Valley Reservoir. Union Valley Reservoir is a Sacramento Municipal Utility District maintained reservoir that decreases in volume in the fall to early winter and is close to full pool in normal rain years following snowmelt periods. The ordinary high-water mark for this reservoir is approximately 770 feet from Project activities.



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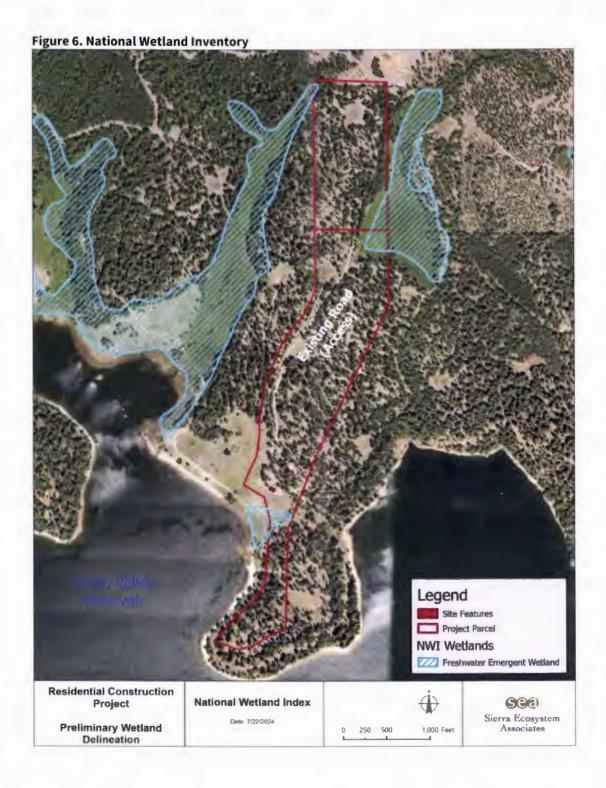
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3.3 Aquatic Features and Potential Wetlands

The wetland and hydrological features from the National Wetland Inventory and the National Hydrology Dataset (USFWS 2024) are shown in Figure 6. Overland flow is generally from north to south. Two streams (ST-1, ST-2) shown in Figure 5 are on either side of the Project. Both flow through meadows and empty into Union Valley Reservoir.

Following completion of the field assessment, delineated features of the wetland differ from those defined by the NWI. NWI wetland data is presented in Figure 6. Specifically, based on the field survey data, the wetlands extend farther and the most southern wetland (W-1) is more complex. W-1 has many wetland plant species, but trends to more upland invasive plant species in the later drier season. The NWI dataset classifies the wetlands within the study area as: Emergent Wetland but also contains Forested Shrub Wetland and Riverine.

Residential Structure Construction Project



4.0 SUMMARY OF FINDINGS

Wetlands within the study area are localized to the three wetland areas W-1, W-2, and W-3. W-1 was a mix of wetland and upland species and its characteristics barely indicated it as a wetland. W-2 is part of a large meadow complex in which the overland flow converged into (ST-2) on the southeastern side into a culvert and road. W-3 forms from a stream (ST-1) and is a riverine wetland. The overland flow of ST-1 disperses and forms a large freshwater emergent wetland.

The annual grass area between the existing structure and the lake was examined closely for wetland indicators. This area had sandy and very well drained soils with no indicators of being a wetland.

0 acres of wetlands and other waters have been identified within the Project disturbance area as shown in Table 2, below. The disturbance area is based on the following Project features:

- · Construction of new residential structure
- Access routes and staging areas

Table 2. Wetland Area Calculations

Location	Acres	Square Feet
Within Study Area and Outside Project Area	4.2	183,514
Within Project Construction Area	0	0

Based on this PWD, no impacts to wetlands will result from the Project.

Michael Kuhl

Residential Structure Construction Project

5.0 REPORT AUTHORS

The following individuals prepared the text presented in this analysis.

Sierra Ecosystem Associates

Rick A. Lind Principal-In-Charge – Document Review

Jeremy Waites Arborist/GIS Specialist – Primary Author

Summer Abel Environmental Scientist – Document Review

Rayann La France Administrative Services Manager – Editor and Document Production

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Residential Structure Construction Project

- U. S. Fish and Wildlife Service 2020. (USFWS 2024) (National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at: http://www.fws.gov/wetlands/
- U.S. Geological Survey, 2023, National Hydrography Dataset (NHD) USGS National Map Downloadable Data Collection: USGS - National Geospatial Technical Operations Center (NGTOC).

Michael Kuhl

Residential Structure Construction Project

Appendix A

Wetland Delineation Data Forms

roject/Site: Union Valley		City/County: El Don	ado Sampling Date: 6/20/2024
pplicant/Owner: Michael Kuhl			Sempling Point: WD-1
rvestigator(s): Jeremy Waites, Summe	Abel	Section, Township	x Range: Section 16, T12N, R14E
andform (hillslope, terrace, etc.):	hiltslope	Local relief (conci	ive, convex, none): none Slope (%):
Subregion (LRR): D	Latitus	de: 38.879483 Lo	ongitude: -120.4142 Datum: WGS94
coil Map Unit Name: Pilliken coarse sar	ndy loam, 5 to 30 percent slope	ns N	WI classification: None
re dimatic / hydrologic conditions on the	sits typical for this time of year	? Yes X	No (If no, explain in Remarks.)
ve Vegetation , Soil , or	Hydrologysignificantly dis	sturbed? A	re "Normal Circumstances" present? Yes? X No
	Hydrologynaturally proble		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map showing sampling point	locations, transect	s, important features, etc.
lydrophytic Vegetation Present?	Yes No X	is the Sampled	Area within a
lydric Sail Present?	Yes No X	Wetlar	
Vetland Hydrology Present?	YesNo_X_		
ternants.			
/EGETATION - Use scientific n	ames of plants		
	Absolute %	Dominant Indica	ntor Dominance Test worksheet:
ree Stratum (Plot size:) Cover	Species? State	
1			That Are OBL, FACW, or FAC: 0 (A)
3.		***************************************	Total Number of Dominant
4			Species Across All Strete: 1 (B)
	0	Total Cover	
Sapling/Shrub Stratum (Plot size:)		Percent of Dominant Species That Are OBL. FACW. or FAC: 0% (A/B)
1			The Act of
2.		-	_
4			
6		=	Providence budge weedsheets
to be commented as a second	0	Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by:
terb Stratum (Plot size: 1. Rumex acetoselle		Y FAC	
2. Verbescum thepsus	1	FAC	
3. Madie elegans	1		FAC species 1 x 3 = 3
4. Junous tenuis	1	FA	C FACU species 32 x 4 = 128
5. Leptosiphon ciliatus	1		UPL species x 5 =0
6			Column Totals: 33 (A) 131 (
7			_
8			Prevalence Index = B/A = 3.97
	34	Total Cover	
Woody Vine Stratum (Plot size:)		Hydrophytic Vegetation Indicators:
1.			Dominance Test is >50%
2.			Prevalence Index is ≤3.01
	0	Total Cover	Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum	50 % C	over of Biotic Crust	

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		led to document the indicator or o		sence of	Indicators.)	
Depth	Matrix	ires				
(inches) Color	(moist) %	Color (moist) %	Туре	LOC ²	Texture	Remarks
2 7.5 YR 3/2	100)			sandy	
				_		
Type, C=Concertration D=Depte.	on RM=Recused Mat	ni ² tocation FL=Pois Linnig, RC=R	oct Charmet, Mw	Malm.		
Is active a Maril Insultantana Change			ne for Broblem	antia Man	ide Colleil.	
	I Cable to all LRRS,	unless otherwise noted.) Indicato	IN TOT PTODIEN	nauc riyo	INC SONS .	
Histosol (A1)		Sandy Redox (S5)	-		2 cm Muck (A1	(A (I BB B)
Histic Epipedon (A2)	_	Stripped Matrix (S6)	-			
Black Histic (A3)		Loamy Mucky Mineral(F1)	-		Very Shallow [
Hydrogen Sulfide (Ad Depleted Below Dark		Loamy Gleyed Matrix (F2)	_		Red Parent Ma Other (Explain	
Thick Durk Surface (Depleted Matrix (F3) Redax Dark Surface (F6)	_		Other (Explain)	RI PORTIGIALS)
Depleted Below Dark	,	Depleted Dark Surface (F7)	3	Indicators	of hydrophytic	vegetation and wetland hydro
Sandy Mucky Minera		Redox Depressions (F8)				listurbed or problematic.
Sandy Gleyed Matrix	(54)					
Restrictive Layer (if present Type:						
		=	Hydric Soil I	Present?	Yes	No_X
Type: Depth (inches):			Hydric Soll I	Present?	Yes_	No X
Туре:			Hydric Soli i	Present?	Yes_	No_X
Type: Depth (inches):			Hydric Soll I	Present?	Yes_	No_X
Type: Depth (inches): Remarks:			Hydric Soll I	Present?	Yes	No X
Type: Depth (inches): Remarks: HYDROLOGY	s:		Hydric Soll I			
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator		k all that apply)	Hydric Soli I			No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator		k all that apply) Self Crust (B11)	Hydric Soli I		Secondary Indic	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o			Hydric Soll I		Secondary Indic	ators (2 or more required)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o		Selt Crust (811)	Hydric Soll I		Secondary Indic Water Str	ators (2 or more required) ined Leaves
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrotogy Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3)		Salt Crust (811) Water Steined Leaves Aquatic Invertebrates (813)	Hydric Soll I		Secondary Indic Water Str Raised Ar Frost Hes	ators (2 or more required) ined Leaves It Mounds
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrotogy Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1)		Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1)			Secondary Indic Water Sta Reised Ar Froat Hes	ators (2 or more required) ined Leaves It Mounds we Hummocks Patterns (B10)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrotogy Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	Living Roots (C		Secondary Indic Water Sta Reised Ar Froat Hes Drainage Dry-Sess	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrotogy Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4)	Living Roots (C		Secondary Indic Water Sta Reised At Frost Hes Drainage Dry-Sess Crayfish Is	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) In Water Table (C2) Burrows (C8)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6)	f one required, chec	Selt Crust (811) Water Steined Leaves. Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title	Living Roots (C		Secondary Indic Water Sta Reised At Frost Hes Drainage Dry-Sess Crayfish E Saturation	ators (2 or more required) ined Leaves It Mounds we Hummocks Patterns (B10) on Water Table (C2) Surrows (C6) o Visible on Aerial Imagery (C2)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrotogy Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri	f one required, chec	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title Stunted or Stressed Plants	Living Roots (C		Secondary Indic Water Sta Reised At Frost Hes Drainage Dry-Sess Crayfish E Saturation Shallow A	ators (2 or more required) ined Leaves It Mounds we Hummocks Patterns (B10) on Water Table (C2) Surrows (C6) o Visible on Aerial Imagery (C2 quitterd (D3)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Concil	f one required, chec	Selt Crust (811) Water Steined Leaves. Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title	Living Roots (C		Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerisl Imagery (C2 opultard (D3) Iral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Concil Algal Mat or Crust	f one required, chec	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title Stunted or Stressed Plants	Living Roots (C		Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) ined Leaves It Mounds we Hummocks Patterns (B10) on Water Table (C2) Surrows (C6) o Visible on Aerial Imagery (C2) quitard (D3)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Concil	f one required, chec	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title Stunted or Stressed Plants	Living Roots (C		Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerisl Imagery (C2 opultard (D3) Iral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aard Sparslet Vegetated Control Algal Mat or Crust Iron Deposits	f one required, chec	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Title Stunted or Stressed Plants	Living Roots (C		Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerisl Imagery (C2 opultard (D3) Iral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Concil Algal Mat or Crust	one required, check	Selt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	Living Roots (C		Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) ined Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerisl Imagery (C2 opultard (D3) Iral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aari Sparslet Vegetated Concil Algal Mat or Crust Iron Deposits Field Observations:	al Imagery (B7)	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	Living Roots (Cil) d Soils (Cil)	(23)	Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish B Saturation Shallow A FAC-Neu	ators (2 or more required) inted Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerisl Imagery (C2 Iquitard (D3) Iral Test (D5) Inic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Concil Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	al Imagery (B7) ave Surface No X Dept	Selt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	Living Roots (Cil) d Soils (Cil)	(23)	Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish I Saturation Shallow A FAC-Neu Geomorp	ators (2 or more required) inted Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerial Imagery (C2 opultard (D3) Iral Test (D5) Inic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparslet Vegetated Conce Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes Water Table Present? Yes	al Imagery (B7)	Selt Crust (811) Water Steined Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	Living Roots (Cil) d Soils (Cil)	(23)	Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish I Saturation Shallow A FAC-Neu Geomorp	ators (2 or more required) inted Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) o Visible on Aerial Imagery (C2 opultard (D3) Iral Test (D5) Inic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B5) Inundation Visible on Aart Sparslet Vegetated Conce Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yee Water Table Present? Yee Saturation Present? Yee Saturation Present? Yee (includes capillary fringe)	at Imagery (B7) No X Dept No X Dept	Selt Crust (811) Water Steined Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks) h (inches) h (inches)	Living Roots (Cil) d Soils (Cil) Wetland Hy	C3)	Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish I Saturation Shallow A FAC-Neu Geomorp	ators (2 or more required) inted Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C2) Iquitard (D3) Irral Test (D5) Inic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Cracks (B5) Inundation Visible on Aart Sparslet Vegetated Conce Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	at Imagery (B7) No X Dept No X Dept	Selt Crust (811) Water Steined Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	Living Roots (Cil) d Soils (Cil) Wetland Hy	C3)	Secondary Indic Water Sta Reised Ar Frost Hes Drainage Dry-Sess Crayfish I Saturation Shallow A FAC-Neu Geomorp	ators (2 or more required) inted Leaves It Mounds Ive Hummocks Patterns (B10) on Water Table (C2) Burrows (C6) In Visible on Aerial Imagery (C) Iquitard (D3) Irral Test (D5) Inic Position

Western Mountains, Valleys and Coast Region

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	TEAMS DETERMINATION DATA TORM				-,			
t/Site:	Union Velley	City/County:	El Dora	ido	Sampling D	nto:	6/20/2024	
ant/Ow	799C Michael Kuhl	State	CA	Sampling Point	WD-2			

Applicant/Owner: Mich	sel Kuhl		State:	CA Sampling Poir	t: WD-2	
investigator(s): Jeres	my Waites, Summer Abel		Section, To	wnship. Range: Se	ction 16, T12N.	R14E
Landform (hillslope, ter	ruce, etc.):	hillslope	Local relief	(concave, convex, none): none	Slope (%):
Subregion (LRR):	D	Latitude:	38.8793	Longitude: -120.4	40 Datum:	WG\$84
Soil Map Unit Name:	Pilliken coarse sandy loam.	5 to 30 percent slopes		NWI classification:	Freshwater	Emergent Wetland
Are climatic / hydrologi	c conditions on the site typic	al for this time of year?	,	Yes X No (if	no, explain in R	Remarks.)
Are Vegetation	, Soil, or Hydrolog	ysignificantly distur	bed?	Are "Normal Circus	nstances" prese	ent? Yes? X No
Are Vegetation	. Soil , or Hydrolog	y naturally problem	atic?	(If needed, explain	any answers in	Remarks.)

Are Vegetation ______, Soit ____, or Hydrology ____naturally problematic? (If needed, explain any answ SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

VEGETATION - Use scientific names of plants

	Absolute %	Dominant	Indicator		ance Test work	sheet:
ree Stratum (Plot size:		Species?	Status	Number of Dominar		
Pinus jeffreyii	- 5			That Are OBL, FAC	W, or FAC:	1 (A)
2. Pinus contorte	2					
3.				Total Number of Do	minant	
4				Species Across All	Strate:	1 (B)
	7	Total Cover				
apling/Shrub Stratum (Plot size:	_)			Percent of Dominar		
1.				That Are OBL, FAC	W, or FAC:	100% (A/B)
2						
3.						
4.						
6						
	0	Total Cover		Prevale	nce Index work	sheet:
erb Stratum (Plot size:)			Total % Cover of:	Multip	oly by:
1. Carex integra	90	Y	OBL	OBL species	90 x 1 =	90
2. Pos pratensis	5		FAC	FACW species	0 x 2 =	0
3. Lollum pretense	5			FAC species	6 x3=	15
4.				FACU species	0 x4=	0
5				UPL species	x 6 =	0
6.				Column Totals:	95 (A)	105 (B
7						
8				Prevalence Ind	ex = B/A =	1.11
	100	Total Cover				
Voody Vine Stratum (Plot size:)			Hydrophyt	ic Vegetation in	dicators:
t	_			X Dominance To	rst is >50%	
2	-			X Prevalence Inc		
	0	Total Cover				ovide supporting
		- TOME COVER			ks or on a separ	
6 Bare Ground in Herb Stratum 1	% C	over of Biotic	Cruent	Problematic H	vdrophytic Vege	tation' (Explain)

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wetfand hydrologematic.
wedfand hydrolo
wedfand hydrolo
required)
(C2)
I Imagery (C2)

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

pplicent/Owner: Michael Kuhl		State	CA San	pling Point: WD-3	
vestigator(s): Jeremy Waites, Summer Abel				pe: Section 16, T12N, R14E	
					Di (EL)
endform (hilfstope, terrace, etc.): hil				nvex, none): none	Slope (%):
bregion (LRR): D				e: -120.4139 Detum: WGS94	
oil Map Unit Name: Piliken coarse sandy loam, 5 to	30 percent slopes			reification: Freshwater Emergent	
e climatic / hydrologic conditions on the site typical for	this time of year?		Yes X N	o (if no, explain in Remarks.)	
re Vegetation , Soll , or Hydrology	significantly dist	urbed?	Are "Nor	mail Circumstances" present? Yes?	X No
			(If neede	d explain any answers in Remarks.)	
UMMARY OF FINDINGS - Attach site map shown	a sampling point	ocations, fr	insects. Impo	ertant features, etc.	
	No	T			
ydric Soil Present? Yes X	No		npled Area w	ithin a Yes X No	
fetland Hydrology Present? Yes	No X		Wetland?		-
emarks:					
EGETATION - Use scientific names of p	lants				
	Absolute %	Dominant	Indicator	Dominance Test wo	rksheet:
ee Stratum (Plot size:)	Cover	Species?	Status	Number of Dominant Species	
1. Pinus jeffreyii	5			That Are OBL, FACW, or FAC:	(A)
2.					
3.				Total Number of Dominant	
4.				Species Across All Strata:	1 (B)
The Man of the same of the sam	5	Total Cover		Percent of Dominant Species	
apling/Shrub Stratum (Plot size:) 1				That Are OBL, FACW, or FAC:	100% (A/B)
2				Hat Me Obe, I nove, or inc.	10010
3		-			
4.					
6.					
	. 0	Total Cover		Prevalence Index w	orksheet:
erb Stratum (Plot size:)					itiply by:
Rumex acetosella	5		FACU	OBL species 0 x 1	
2. Verbescum thepsus	2		FACU	FACW species 0 x 2	
3. Carex fracta	90	Υ	FAC	FAC species 83 x 3	= 249
4. Junous terruis	1	5	FAC	FACU species 2 x 4	= 8
5. Leymus tritiooides	2		FAC	UPL speciesx 5	= 0
6.				Column Totals: 85 (A)	257 (
7					
9				Prevalence Index = B/A =	3.02
	90	Total Cover		Troubleton mon	
(and the One of Otto day	- 80	TOME! COVE		Hydrophytic Vegetation	Indicators
(cody Vine Stratum (Plot size:)					moicetors.
1				X Dominance Test is >50%	
2.				Prevalence Index is ≤3.01 Morphological Adaptations	(Denistration
	0	Total Cover		data in Remarks or on a seg	
Bare Ground in Herb Stratum 3	% Co	ver of Biotic (Crumb	Problematic Hydrophytic Ve	
Date District II 1 100 Strategill	A 00	ver or brose ((2.4)
Hydrophytic Vegetation Present?					
Yes X No					
The second secon					

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				e of Indicators.)			
	etrix	Redox Feature		-			
(inches) Color (mois		Color (moist) %	Type' LOC		Remarks		
10 YR 3/3	100			sandy			
Type, C=Concertration, D=Depleton, R1	I-Dun coll Milio	Location FL=Pois Little, RC=Roc	Charact Matter				
Type, C=Concertrator, E=Depletor, H7	A=Heccied with	Location FE=Pera Enric, 4C=450	Cherner, w-water				
lydric Soil Indicators: (Applicable	to all LRRs, u	niess otherwise noted.) Indicators	for Problematic	Hydric Solis ³ :			
Histosol (A1)	X						
Histic Epipedon (A2)		Stripped Matrix (S6)		2 cm Muck (A1	0) (LRR B)		
Black Histic (A3)		Loamy Mucky Mineral(F1)		Very Shallow D	erk Surface		
Hydrogen Sulfide (A4)		Loamy Gleyed Metrix (F2)		_			
Depleted Below Dark Surfa	ce (At1	Depleted Matrix (F3)	_	Red Parent Material (TF2) Other (Explain in Remarks)			
Thick Dark Surface (A12)		Redox Dark Surface (F6)					
Depleted Below Dark Surfa	ice (A11)	Depleted Dark Surface (F7)			regetation and wetland hydrolo		
Sandy Mucky Minerel (S1)		Redox Depressions (F8)	must be	e present, unless d	isturbed or problematic.		
Sandy Gleyed Matrix (S4)		_					
Restrictive Layer (if present): Type: Depth (inches): Remarks:		_	Hydric Soll Prese	nt? Yes	XNo		
Type: Depth (inches): Remarks: HYDROLOGY			Hydric Boll Prese	rnt? Yes	XNo		
Type: Depth (inches): Remerks: HYDROLOGY Wetland Hydrology Indicators:	Service & short		Hydric Boll Prese				
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one	required; check	all that apply)	Hydric Boll Prese	Secondary Indica	ators (2 or more required)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	required; check	all that apply) Selt Crust (B11)	Hydric Boll Prese	Secondary Indice	ators (2 or more required)		
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one) Surface Water (A1) High Water Table (A2)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves	Hydric Boll Prese	Secondary Indica Water Sta Reised An	ators (2 or more required) ined Leeves t Mounds		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13)	Hydric Boll Prese	Secondary Indice Water Sta Raised An	ators (2 or more required) ined Leeves t Mounds ve Hummocks		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		Secondary Indice Water Sta Raised An Frost Heav	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (B10)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13)		Secondary Indice Water Sta Reised An Frost Heav Drainage I	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) in Water Table (C2)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		Secondary Indice Water Sta Reised An Frost Heav Drainage I	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (B10)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	required; check	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Uk	ring Roots (C3)	Secondary Indice Water Sta Raised An Frost Heav Drainage I Dry-Sesso	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) in Water Table (C2)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	-	all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Uk Presence of Reduced Iron (C4)	ring Roots (C3)	Secondary Indice Water Sta Raised An Frost Heav Drainage I Dry-Sesso Crayfish B Saturation	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) on Water Table (C2)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6)		all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Uk Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ring Roots (C3)	Secondary Indice Water Sta Reised An Frost Heav Drainage I Dry-Sesso Crayfish B Saturation Shallow A	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C2)		
Type: Depth (inches): Remerks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima		all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Uk Presence of Reduced Iron (C4) Recent Iron Reduction in Titled S Stunted or Stressed Plants	ring Roots (C3)	Secondary Indice Water Sta Raised An Frost Heav Drainage I Dry-Sesso Crayfish B Saturation Shallow A FAC-Neuto	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) in Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3)		
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one) Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Spanslet Vegetated Concave Sci		all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Uk Presence of Reduced Iron (C4) Recent Iron Reduction in Titled S Stunted or Stressed Plants	ring Roots (C3)	Secondary Indice Water Sta Raised An Frost Heav Drainage I Dry-Sesso Crayfish B Saturation Shallow A FAC-Neuto	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) ral Test (D5)		
Type: Depth (inches): Remerks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (iminimum of one I Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soll Cracks (B6) Inundation Visible on Aerial Ima Sparslet Vegetated Concave St Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yee N	afface	all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lic Presence of Reduced Iron (C4) Recent Iron Reduction in Titled S Stunted or Stressed Plants Other (Explain in Remerks)	ring Roots (C3) Soils (C6)	Secondary Indice Water Sta Raised An Frost Heav Drainage I Dry-Sesso Crayfish B Saturation Shallow A FAC-Neuto	ators (2 or more required) ined Leeves t Mounds ve Hummocks Patterns (810) in Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) rail Text (D5) elic Position		

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

			El Dorado			
plicant/Owner: Michael Kuhl		State:	ÇA San	npling Point: WD-4		
vestigator(s): Jeremy Waites, Summer Abel		Section, T	ownship. Rang	ge: Section 16, T1	2N, R14E	
ndform (hillslope, terrace, etc.): hil	Islope			nvex, none): non		Slope (%):
bregion (LRR): D		o: 39.878934	∏ Longitud	e: -120.4137 Det	um: WGS84	
ill Map Unit Name: Pilliken coarse sandy loam, 5 to				ssification: None		
e climatic / hydrologic conditions on the site typical for				o(If no, explain	in Remarks.)	
e Vegetation , Soil , or Hydrology				mal Circumstances" p		r No
					_	
e Vegetation Soil, or Hydrology					s in Remiers.)	
JMMARY OF FINDINGS - Attach site map showin	g sampling point	locations, tr	ansects, impo	ortant features, etc.		
	No X	Is the Sa	npled Area w	ithin a		
rdric Soil Present? Yes_			Wetland?	Yes	Mo X	
etland Hydrology Present? Yes_	No X	1				
marks:						
EGETATION - Use scientific names of p	lante					
COLTATION - OSE SCIENTIFIC Harries of p				Domin	ence Test works	haet.
ee Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Number of Domina		HINEEL.
1. Pinus jeffreyii	40	X	-	That Are OBL, FAC		0 (A)
2. Abies concolor	20					
3.				Total Number of D		
4				Species Across All	Strata:	1 (B)
spling/Shrub Stratum (Plot size:)	60	Total Cover		Percent of Domina	nt Species	
1. Plot size:				That Are OBL. FA		0% (A/B)
2				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	,
3.						
4.						
5.						
	0	Total Cover		Preval	ence Index work	sheet:
erb Stratum (Plot size:				Total % Cover of:	Multip	
1. Lotus corniculatus	1		FACU	OBL species	0 x 1 =	0
2. Verbascum thapsus	- 5		FACU	FACW species	1 x3=	3
3. Achilles millefolium	-			FAC species		
4. Cynosurus echinetus	1		*	FACU species	8 x 4 =	24
5. Leptosiphon ciliatus	3		-	UPL species	x 5 =	0
6.				Column Totals:	(A)	(B
7						
в				Prevalence In	dex = B/A =	3.86
	11	Total Cover				
(oody Vine Stratum (Plot size:)				Hydrophy	tic Vegetation in	dicators:
1				Dominance T	est is >50%	
2.				Prevalence In	dex is ≤3.01	
	0	Total Cover			Adaptations (Pr	
					rks or on a separe	
Bare Ground in Herb Stratum 50	% Co	over of Biotic	Crust	Problematic I	lydrophytic Veget	ation¹ (Explain)
Hydrophytic Vegetation Present?						
Yes No X						

SOIL								Sampling Point:	WD-4
rofile Description	n: (Describe to the depth	needed (o document the Indi	lcator or c	onfirm the	absence	of Indicators.)		
Depth	Matrix		Re	edox Featu	res				
(inches)	Calor (moist)	%	Color (moist)	*	Туре	LOC2	Texture	Remarks	
	10 YR 3/2	100					sandy		
						_			
Type, C≂Concer trat	ur D=Deplace RM=Reduced	Motox.	2Location FL=Pore Li	ring, RC=Ro	oct that net,	¥≠Matric.			
	tors: (Applicable to all LR	Rs, unte) Indicator	s for Prob	lematic Hy	rdric Solls':		
Histosol (_		Sandy Redox (S5)						
	pedon (A2)		Stripped Matrix (S6)				2 cm Muck (A1		
Black His	zic (A3)		Loamy Mucky Miner	el(F1)			Very Shallow D		
	Sulfide (A4)		Loamy Gleyed Matri				Red Parent Ma	, ,	
	Below Dark Surface (A11		Depleted Matrix (F3)				Other (Explain	in Remarks)	
	rk Surface (A12) Below Derk Surface (A11)		Redax Durk Surface Depleted Dark Surfa	, ,		31	65 - odravski si s	vegetation and wette	a d bundenla
-	ucky Mineral (S1)		Redox Depressions					sturbed or problems	
	eyed Matrix (S4)			(,					
Restrictive Laye Type:	r (If present):								
Depth (inches	١.				Libertrie D.	oli Preseni	!? Yes	No X	
Deput (alches	·				riyur. o	ON FIEDEIN			_
Remarks:									
HYDROLOGY									
Wetland Hydrolog		bb#	#				Consendent leaker	ators (2 or more requi	(bear
	(minimum of one required:	neck all						ined Leaves	irea)
Surface Wate			Sait Crust (B11)						
High Water To	able (A2)		Water Stained Leav	195			Raised Ar		
Saturation (A3	3)		Aquatic Invertebrate	rs (B13)			Frost Hee	ve Hummocks	
Water Marks	(B1)	_	Hydrogen Sulfide O	dor (C1)			Drainage	Patterns (B10)	
Sediment Dep	cosits (B2)		Oxidized Rhizosphe	res along l	iving Root	s (C3)	Dry-Seaso	on Water Table (C2)	
Drift Deposits	(83)		Presence of Reduce	ed Iron (C4)		Crayfish B	Burrows (C8)	
Surface Soil C	Cracks (B6)		Recent Iron Reducti	ion in Tilled	Soils (C6)		Saturation	Visible on Aerial Ima	gery (C2)
Inundation Vis	sible on Aerial Imagery (B7)		Stunted or Stressed	Plents			Shallow A	quitard (D3)	
	stated Concave Surface		Other (Explain in Re				FAC-Neul	trai Test (D5)	
Algal Mat or C		*****						hic Position	
Iron Deposits		_							
Field Observation	ns:								
	sent? Yes No X	Depth (in	ches)						
			ches)		Wetland	Hydrology	Present? Yes	Mo X	
Saturation Present		Depth (in	ches)						
(includes capillary	иш(де)								
Describe Recorded	d Data (streem gauge, mon	toring we	ell, aerial photos, prev	ious inspec	tions), if av	variable:			
Remarks:									

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

ubregion (LRR): D	ner Abel hillslope	Section, Township, Ran	mpling Point: WD-5 ge: Section 16, T12N, R14E
undform (hillstope, terrace, etc.);			
bregion (LRR): D		Local relief (concesses co	nivex, none): none Slope (%):
		_	
			de: -120.4135 Datum: WGS94
il Map Unit Name: Pilliken coarse s	andy loam, 5 to 30 percent slope		saffication: None
e climatic / hydrologic conditions on the	e site typical for this time of year	? Yes X	to (If no, explain in Remarks.)
e Vegetation, Soil,	or Hydrologysignificantly di	sturbed? Are 'No	rmal Circumstances" present? Yes? X No
re Vegetation , Soil ,	or Hydrology naturally probl	ematic? (If needs	ed explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach sit		t locations, transects, imp	ortant reatures, etc.
rdrophytic Vegetation Present?	Yes X No	is the Sampled Area w	rithin a Yes X No
ydric Soil Present? fetland Hydrology Present?	Yes No X	Wetland?	449 X 440
	TesNo		
emarks:			
EGETATION - Use scientific	names of plants		
	Absolute %	Dominant Indicator	Dominance Test worksheet:
se Stratum (Plot size:) Cover	Species? Status	Number of Dominant Species
1 Pinus jeffreyii	10		That Are OBL, FACW, or FAC: 1 (A)
2. Abies concolor	5	•	Total Number of Dominant
3.			1
4	15	Total Cover	Species Across All Strate: 1 (B)
apling/Shrub Stratum (Plot size.		Total Cover	Percent of Dominant Species
1.	/		That Are OBL, FACW, or FAC: 100% (A/B)
2.			
3			
4			
5.			
	0	Total Cover	Prevalence Index worksheet:
erb Stratum (Plot size:	, —		Total % Cover of: Multiply by:
1 Rumex acetoselle	5	FACU	OBL species 0 x 1 = 0
2. Bromus tectorum	5		FACW species 0 x 2 = 0
3. Hypericum perforatum	5	FACU	FAC species 30 x 3 = 90
4. Carex fracta	30	X FAC	FACU species 15 x 4 = 60
5. Leptosiphon cilietus			
6.			Column Totals: 45 (A) 150 (
7. Achilles millefolium	5	FACU	
8			Prevalence Index = B/A = 3.33
	51	Total Cover	
loody Vine Stratum (Plot size:	\	•	Hydrophytic Vegetation Indicators:
4			X Dominance Test is >50%
2			Prevalence Index is ≤3.01 Morphological Adaptations (Provide supporting
	0	Total Cover	data in Remarks or on a separate sheat)
Bare Ground in Herb Stratum	15 % 0	Cover of Biotic Crust	Problematic Hydrophytic Vegetation¹ (Explain)
Bare Globing in Herb Stratum	15	OVER DI BIORC CITURE	Problematic riveropriyee vegetation (Expense)
Hydrophytic Vegetation Present	17		
Yes X No			

Depth	n: (Describe to the depti Matrix			Redox Feats			,	
(inches)	Color (moist)	%	Color (moist)	%	Туре	LOC ³	Texture	Remarks
(inches)			Color (moist)	76	Туре	toc		Veliable
	10YR 4/4	100					sandy	

					-			
yes, C=Concer but	ur E=_epistor RM=Reduc	od Metrix	² Location FL=Pers	uring, Rose	oct Chernel,	M=Matin.		
vdric Soil Indica	tors: (Applicable to all L	RRs. uni	ess otherwise note	d.) Indicato	s for Prob	lematic Hy	rdric Soils³:	
Histosol (Sandy Redox (S5)					
Histic Epi	pedon (A2)		Stripped Matrix (S	6)			2 cm Muck (A	10) (LRR B)
Black His	tic (A3)		Loamy Mucky Mine	eral(F1)			Very Shallow	Dark Surface
Hydrogen	Sulfide (A4)		Loamy Gleyed Mar	trix (F2)			Red Parent M	sterial (TF2)
	Below Dark Surface (A11		Depleted Matrix (F				Other (Explain	
Thick Dar	rk Surface (A12)		Redox Dark Surfa	ce (F6)		-	_	
	Below Dark Surface (A11)		_ Depleted Dark Sur					vegetation and wetland hydrol
	ucky Mineral (\$1)		Redax Depression	ns (FB)		must be	present, unless	disturbed or problematic.
- Calloy Cr	eyed Matrix (S4)		_					
Restrictive Layer	r (if present):							
Type:			-					
Depth (inches);				Hydric 8	oll Present	? Yes	No X
Remarks:								
ryothorna.								
HYDROLOGY								
Wetland Hydrolog								
	(minimum of one required	check al						cators (2 or more required)
Surface Water		-	Selt Crust (B11)					tained Leaves
High Water Ta	sble (A2)		_Water Stained Les	eves			Raised A	Int Mounds
Saturation (A3	3)		Aquetic Invertebre	tes (B13)			Frost He	eve Hummocks
Water Marks	(B1)		Hydrogen Sulfide	Odor (C1)			Drainage	Patterns (B10)
Sediment Dep	oosits (B2)		Oxidized Rhizospi	heres along	Living Root	rs (C3)	Dry-Seat	son Water Table (C2)
Drift Deposits	(83)		Presence of Redu	ced fron (C4)		Crayfish	Burrows (C8)
Surface Soil C			Recent Iron Redu			1	Saturation	n Visible on Aerial Imagery (C2
_	ible on Aerial Imagery (B	_	Stunted or Stresse		, , , , , , , , , , , , , , , , , , , ,			Aquitard (D3)
	tated Concave Surface	_	Other (Explain in)					utrai Test (D5)
		-	Other (Explain in	reminaries)				phic Position
Algal Mat or C	rust	_	-				Geamar	pric Position
Iron Deposits								
Field Observation	is;							
Surface Water Pre		Depth (i	nches)					
Water Table Press		Depth (i			Wetland	Hydrology	Present? Yo	HSNo_X
Saturation Present		Depth (i	nches)					
(includes capillary	ringe)							
Describe Recorded	d Data (stream gauge, mo	nitorina w	ell, serial photos, pre	evious inspe	ctions), if a	vailable:		
			p	-				
Remarks:								

Western Mountains, Valleys and Coast Region

roject/Site: Union Valley		City/County:	El Dorado	Sampling	Date: 6/20/202	24
pplicant/Owner: Michael Kuhl				pling Point: WD-1		
vestigator(s): Jeremy Waites, Sum	mer Abel	Section, T	ownship. Rang	e: Section 16, T12	2N. R14E	
andform (hillslope, terrace, etc.):	hillslope	Local relie	f (concave, co	ivex, none): none	Sk	pe (%):
abregion (LRR): D		Latitude: 38.879483	In Longitud	e: -120.4142 Datu	m: WGS84	
oil Map Unit Name: Pilliken coerse	sandy loam, 5 to 30 percent	slopes	NWI clas	sification: None		
e climatic / hydrologic conditions on t				o (If no, explain ir	Remarks.)	
re Vegetation, Soil,	or Hydrology significan	ntly disturbed?	Are "Nor	mal Circumstances" pre	rsent? Yes? X	No
	or Hydrologynaturally			d, explain any answers		
UMMARY OF FINDINGS - Attach s			ansects, Impo	rtant features, etc.		
ydrophytic Vegetation Present?	Yes No X					
ydric Sail Present?	Yes No X		mpled Area w Wetland?	ithin a Yes	No X	
fetland Hydrology Present?	Yes No X		AA CELON ICI I			
emarks:						
EGETATION - Use scientific						
ee Stratum (Plot size:	Absolu) Covi		Indicator Status	Domine Number of Dominar	nce Test worksh	eet:
1. Pinus jeffreyii	25		Senera	That Are OBL, FAC		0 (A)
2.					_	
3				Total Number of Do		
4.				Species Across All	Strata:	1 (B)
apling/Shrub Stratum (Plot size:	25	Total Cover		Percent of Dominan	t Species	
1.				That Are OBL, FAC		0% (A/B)
2.						
3.						
4.						
6.		Total Cover		Bravala	nce index works	neet.
arb Stratum (Plot size:		Total Cover		Total % Cover of:	Multiply	
1. Carex fracta			FAC	OBL species	0 x 1 =	0
2. Stipe occidentallis	15	Y		FACW species	0 x 2 =	0
3. Rumex acetosella	15		FACU	FAC species	5 x3=	15
4. Madia elegana	5		-	FACU species	15 x4=	60
5. Leptosiphon cilietus	1			UPL species	x 5 =	0
6. Lupinus fulcratus	1			Column Totals:	20 (A)	75
7						
8.				Prevalence ind	ex = B/A =	3.75
	42	Total Cover				
foody Vine Stratum (Plot size:)			Hydrophyli	ic Vegetation Ind	cetors:
1				Dominance Te	st is >50%	
2				Prevalence inc	lex is ≤3.0 ¹	
	0	Total Cover			Adaptations (Prov	
					ks or on a separat	
Bare Ground in Herb Stratum	50	% Cover of Blotic	Crust	Problematic Hy	ydrophytic Vegetal	ion¹ (Explain)
Hydrophytic Vegetation Preser						

Sierra Ecosystem Associates Preliminary Wetland Delineation

US Army Corp of Engineers

Western Mountains. Valleys and Coast Region

BOIL				Sampling Point:	WD-1
roffle Description: (Describe to the depth need	ed to document the indicator or confin	m the absence	of Indicators.)		
Depth Matrix	Redox Features				
(inches) Calar (maist) %	Color (moist) % Ty	pe LOC2	Texture	Remarks	
2 10 YR 3/2 100			sandy		
					-
you. C=Concertration, D=Deptation RM=Reduced Visto	Location FL=Pers in rig. RC=Roct Ch	er nel, M=Melina.			
ydric Soil Indicators: (Applicable to all LRRs, u	unless otherwise noted.) Indicators for	Problematic Hy	rdric Solis³:		
Histosol (A1)	Sendy Redox (S5)				
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10)	(LRR B)	
Black Histic (A3)	Loamy Mucky Mineral(F1)		Very Shallow Da	rk Surface	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Mate	rial (TF2)	
Depleted Below Dark Surface (A11	Depleted Matrix (F3)		Other (Explain in	Remarks)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)				
Depleted Balow Dark Surface (A11)	Depleted Dark Surface (F7)			getation and wetla	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	must be	present, unless dis	turbed or problems	tic.
Sandy Gleyed Matrix (S4)					
Restrictive Layer (if present):					
Type:					
Depth (inches):	Hyc	tric Soll Presen	? Yes	No_X	
Remarks:					
Name I acv					
HYDROLOGY Vetland Hydrology Indicators:					-
rimary Indicators (minimum of one required; check	all that apply)		Secondary Indicat	ors (2 or more requ	ired)
Surface Water (A1)	Salt Crust (B11)		Water Stain		
High Water Table (A2)			Raised Ant		
	Weter Stained Leaves				
Saturation (A3)	Aquatic Invertebrates (B13)			Hummocks	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)			atterns (B10)	
Sediment Deposits (B2)	Oxidized Rhizospheres along Living	Roots (C3)	Dry-Sessor	Water Table (C2)	
Drift Deposits (B3)	Presence of Reduced Iron (C4)		Crayfish Bu	rrows (CB)	
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soll-	(C8)	Saturation	/isible on Aerial Ima	igery (C2)
Inundation Visible on Aerial Imagery (B7)	Stunted or Stressed Plants		Shallow Aq	uitard (D3)	
Sparslet Vegetated Concave Surface	Other (Explain in Remarks)		FAC-Neutra	(Test (D5)	
Algal Mat or Crust			Geomorphi	Position	
Iron Deposits	_				
Field Observations:					
Surface Water Present? Yes No X Dept					
		tland Hydrolog	Present? Yes	No X	
Saturation Present? Yes No X Depti	(inches)				
includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring	well serial photos, reactions in spections) if available			
Heroco has faramit Bander moutourl	i iran, amini priocos, previous nispections	A STANSON			
Remarks:					

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region Project/Site: Union Valley City/County: El Dorado Sempling Date: 6/20/2024 Applicant/Owner: Michael Kuhl State: CA Sempling Point: WD-1 Investigator(s): Jeremy Walkes, Summer Abel Section. Township. Range: Section 16. T12N. R14E Landform (hillalope, terrace, etc.): hillalope Local relief (concave, convex, none): none slope (%):

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?

Hydric Soil Present?

Yes No X

Wetland Hydrology Present?

No X

No X

Wetland?

Is the Sampled Area within a Wetland?

Wetland?

VEGETATION - Use scientific names of plants

Absolute %	Dominant	Indicator	Domini	ence Test works	neer:
) Caver	Species?	Status	Number of Dominar	nt Species	
50	Х		That Are OBL, FAC	W, or FAC:	0 (A)
10					
			Total Number of Do	minant	
			Species Across All	Strata:	1 (B)
60	Total Cover				
_)					
			That Are OBL, FAC	W, or FAC:	0% (A/B)
_					
0	_ Total Cover				
)			Total % Cover of:		
		FAC			0
		-	FACW species		0
5		FACU	FAC species	1 x 3 =	3
25			FACU species	6 x4 =	20
1			UPL species	x 6 =	0
			Column Totals:	6 (A)	23 (
			Prevalence Ind	ex = B/A =	3.83
37	Total Cover				
_)			Hydrophyl	ic Vegetation Inc	dicators:
			Dominance To	est is >50%	
			Prevalence in	dex is \$3.01	
0	Total Cover		Morphological	Adaptations (Pro	vide supportin
-			date in Remar	ks or on a separe	te sheet)
%	Cover of Biotic	Crust	Problematic H	ydrophytic Vegeta	ition' (Explain)
	0 0 1 5 5 25 1 37	0 Total Cover 0 Total Cover 1 5 5 5 1	10	10 Total Number of Do Species Across All Boundary of Do Species Across All Percent of Dominar That Are OBL, FAC 1 FAC OBL species 5 FACU FAC species 5 FACU FAC species 1 UPL species 1 UPL species Column Totals: Prevalence Ind 37 Total Cover Dominance To Prevalence Ind Morphological data in Remark	Total Number of Dominant Species Across All Strata:

Western Mountains, Valleys and Coast Region

(inches)	Color (moist)	%	Color (moist)	%	Туре	LOC2	Texture	Remarks	
2	2.5 YR 3/2	100	Color (molsk)		Туре	100	sandy loam		
2	2.5 TR 3/2	100					Sality loan		
			-			-	-		
				_					
Type, C=Concertrat	or DeDopision PM=Reduct	of Miche.	² Lecauon FL-Pera Line	iç, २०=२०	ct Charnet,	M=Matrix			
hadda Mad badkaad					des Brest	Laurantia Ma	etela Ballaile		
	tors: (Applicable to all Li	RRS, UNI		naic ators	s for Prop	lematic my	duc sous.:		
Histosol (A1) pedon (A2)		Sendy Redox (S5) Stripped Matrix (S6)				2 em Muck (A10) (LRR B)	
Black His			Loamy Mucky Mineral	(EAS			-	Dark Surface	
			-				_	Asterial (TF2)	
	Sulfide (A4) Below Dark Surface (A11		Loamy Gleyed Matrix Depleted Matrix (F3)	(-2)			_	naterial (TF2) in in Remarks)	
	rk Surface (A12)		Redox Dark Surface (F6)		-			
	Below Derk Surface (A11)		Depleted Dark Surface					c vegetation and wetland	
	ucky Mineral (S1)		Redax Depressions (F	-9)		must be p	present, unless	disturbed or problematic	
Sandy G	eyed Matrix (S4)		_						
Destrictive I men	r (If proceed).			_					
Restrictive Layer	r (If present):			T					
Тура:			-	T	Hydric S	oll Present	? Yes	No X	
			-		Hydric 8	oli Preseni	? Yes_	No_X	-
Туре:			•		Hydric S	oli Preseni	? Yes_	No_X	-
Type: Depth (inches)			•		Hydric S	oli Preseni	? Yes_	No_X	-
Type: Depth (inches)			•		Hydric S	oll Present	? Yes_	No_X	-
Type: Depth (inches) Remarks:):		-		Hydric So	oll Present	? Yes_	No_X	-
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog	y Indicators:		•		Hydric S	oli Present			
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog):	check all	that apply)		Hydric S	oll Present	Secondary Ind	licators (2 or more require	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog	ny Indicators: (minimum of one required.	check all	that apply) Salt Crust (811)		Hydric 8	oll Present	Secondary Ind	licators (2 or more require Stained Leaves	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators	ny Indicators: (minimum of one required,	check all			Hydric 8	oli Preseni	Secondary Ind	licators (2 or more require	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water	ny Indicators: (minimum of one required, r (A1)	check all	Salt Crust (811)		Hydric 8	oli Preseni	Secondary Ind Water S	licators (2 or more require Stained Leaves	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Te	ny Indicators: (minimum of one required, r (A1) able (A2)	check all	Salt Crust (811) Water Stained Leaves	(B13)	Hydric So	oll Present	Secondary Ind Water S Raised . Frost Hi	licators (2 or more require Stained Leaves Ant Mounds	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Ta	ny Indicators: (minimum of one required, r (A1) able (A2) ab) (B1)	check all	Salt Crust (811) Water Stained Leaves Aquatic Invertebrates	(B13) or (C1)			Secondary Ind Water S Raised Frost H	licators (2 or more require Stained Leaves Ant Mounds seve Hummocks	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Ta Seturation (A3 Water Marks (ny Indicators: (minimum of one required, r (A1) able (A2) ab) (B1) oseits (B2)	check all	Salt Crust (811) Water Stained Leaves Aquatic Invertebrates Hydrogen Sulfide Odd	(B13) or (C1) os along L	living Root		Secondary Ind Water S Raised Frost Hi Drainag Dry-Ses	licators (2 or more require stained Leaves Ant Mounds seve Hummocks p Patterns (B10)	
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Te Seturation (A3 Water Marks (Sediment Dep	ny Indicators: (minimum of one required, r (A1) able (A2) ab) (B1) oseits (B2) (B3)	check all	Salt Crust (811) Water Stained Leaves Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphera	(B13) or (C1) os along L Iron (C4)	iving Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Ses	licators (2 or more require stained Leaves Ant Mounds seve Hummocks pe Patterns (B10) son Water Table (C2)	d)
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Te Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C	ny Indicators: (minimum of one required; r (A1) able (A2) ab) (B1) osaits (B2) (B3) racks (B8)		Salt Crust (811) Water Steined Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	(B13) or (C1) os along L I Iron (C4) o in Titled	iving Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Ses Craylish	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8)	d)
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Vis	ny Indicators: (minimum of one required, r (A1) able (A2) ab) (B1) onits (B2) (B3) Fracks (B6)		Salt Crust (811) Water Steined Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F	(B13) or (C1) os along L Iron (C4) on in Titled	iving Root	s (C3)	Secondary Ind Water S Raised Frost Hi Drainag Dry-Ses Craylish Saturati	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3)	d)
Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Via	ny Indicators: (minimum of one required; r (A1) able (A2) b) (B1) onaits (B2) (B3) Fracks (B6) able on Aerial Imagery (B7 stated Concave Surface		Salt Crust (811) Water Steined Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	(B13) or (C1) os along L Iron (C4) on in Titled	iving Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Ses Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5)	d)
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Type: Depth (inches) Remarks: HYDROLOGY Netland Hydrolog Primary Indicators Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Via	y Indicators: (minimum of one required; r (A1) able (A2) 3) (B1) coalts (B2) (B3) cracks (B6) able on Aerial Imagery (B7 stated Concave Surface		Salt Crust (811) Water Steined Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F	(B13) or (C1) os along L Iron (C4) on in Titled	iving Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Ses Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5)	d)
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Type: Depth (inches) Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators is Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Vis Sparslet Vege Algal Mat or C Iron Deposits Field Observation Surface Water Prese Water Table Prese	y Indicators: (minimum of one required; r (A1) able (A2) b) (B1) sosits (B2) (B3) Fracks (B6) able on Aerial Imagery (B7 rtated Concave Surface crust B5: sent? Yeb No X Ant? Yeb No X	Depth (in Depth	Salt Crust (B11) Water Stained Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F Other (Explain in Rem	(B13) or (C1) os along L Iron (C4) on in Titled	living Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5)	d)
Type: Depth (inches) Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators is Surface Water High Water Ta Seturation (As) Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Via Sparslet Vege Algal Mat or C Iron Deposits Field Observation Surface Water Present Saturation Present	y Indicators: (minimum of one required; r (A1) able (A2) b) (B1) coalts (B2) (B3) cracks (B6) sible on Aerial Imagery (B7 stated Concave Surface rount is: sent? Yes No X inter Yes No X inter Yes No X inter Yes No X inter Yes No X	Depth (in Depth	Salt Crust (B11) Water Stained Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F Other (Explain in Rem	(B13) or (C1) os along L Iron (C4) on in Titled	living Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5) rphic Position	d)
Type: Depth (inches) Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators is Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Vis Sparslet Vege Algal Mat or C Iron Deposits Field Observation Surface Water Press Water Table Press	y Indicators: (minimum of one required; r (A1) able (A2) b) (B1) coalts (B2) (B3) cracks (B6) sible on Aerial Imagery (B7 stated Concave Surface rount is: sent? Yes No X inter Yes No X inter Yes No X inter Yes No X inter Yes No X	Depth (in	Salt Crust (B11) Water Stained Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F Other (Explain in Rem	(B13) or (C1) os along L Iron (C4) on in Titled	living Root	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5) rphic Position	d)
Type: Depth (inches) Remarks: HYDROLOGY Vetland Hydrolog Primary Indicators: Surface Water High Water Ta Seturation (A3 Water Marks (Sediment Dep Drift Deposits Surface Soil C Inundation Vis Sparslet Vege Algal Mat or C Iron Deposits Pleid Observation Surface Water Pre Vater Table Present sincludes capillary (y Indicators: (minimum of one required; r (A1) able (A2) b) (B1) coalts (B2) (B3) cracks (B6) sible on Aerial Imagery (B7 stated Concave Surface rount is: sent? Yes No X inter Yes No X inter Yes No X inter Yes No X inter Yes No X	Depth (in Depth (in	Salt Crust (B11) Water Stained Leaver Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed F Other (Explain in Rem	(B13) or (C1) or along L lron (C4) or in Titled Ments nerks)	iving Root Soils (C6)	s (C3)	Secondary Ind Water S Raised Frost He Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	icators (2 or more require stained Leaves Ant Mounds seve Hummocks se Patterns (B10) son Water Table (C2) i Burrows (C8) on Visible on Aerial Image Aquitard (D3) sutral Test (D5) rphic Position	d)

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region Project/Sks: Union Valley City/County: El Dorado Sampling Date: 6/20/2024 Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-8 Section, Township, Range: Section 16, T12N, R14E Investigator(s): Jeremy Waites, Summer Abel Lendform (hitistope, terrace, etc.): meadow Local relief (concave, convex, none): none Subregion (LRR): D Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: Freshwater emergent Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Thormal Circumstances* present? Yes X No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Thormal Circumstances* present? Yes? X No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No No Is the Sampled Area within a Hydric Soil Present? Yes X No Hydric Soil Present? Wetland Hydrology Present? Wetland? Yes X No VEGETATION - Use scientific names of plants Dominance Test worksheet: Absolute % Dominant Indicator Iree Stratum (Plot size: Status **Number of Dominant Species** Cover Species? That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Streta: 0 Total Cover Percent of Dominant Species Sapling/Shrub Stratum (Plot size: FACW That Are OBL, FACW, or FAC: 100% (A/B) 1. Alnus incana asp. tenuifolia Total Cover Prevalence Index worksheet: Total % Cover of: Herb Stratum (Plot size OBL 1 Carex utriculata 2 Scirpus microcarpus 10 OBL FAC 5 x 3 = 15 3. Veratrum californicum 1 OBL FACU species 32 x 4 = 128 4. Erythrenthe guttete x 5 = 0 5 Epilobium angustifolium UPL species Column Totals: 104 (A) FACW 218 (8) 6. Camassia leichtlinii ssp. suksdorfii Prevalence Index = B/A = 2.08 70 Total Cover Hydrophytic Vegetation Indicators: Noody Vine Stratum (Plot size: X Dominance Test is >50% X Prevalence Index is ≤3.01 Morphological Adaptations (Provide supporting 0 Total Cover data in Remerks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) % Bare Ground in Herb Stratum % Cover of Biotic Crust Hydrophytic Vegetation Present?

Western Mountains, Valleys and Coast Region

Donth	BB b-fr -		firm the absence		
Depth _	Metrix	Redox Features		~	Remarks
(inches)	Color (moist)		Type LOC	Texture	Kemanks
	.5 YR 2.5/1	100		Loam	
Turns	E=Deplace RM=Reduced	Vatris, ² Location FL=Pera Liting, RC=Roct 0	Charnel Makadra		
1959. C-Shicer trat of	Fundament No addocted	Value, Location PL Cid La Fig. 40-4001	Citer net, vi-kloti v.		
tydric Soll Indicator	rs: (Applicable to all LRI	Rs, unless otherwise noted.) Indicators fo	or Problematic H	ydric Solis³:	
Histosol (A:	1)	Sandy Redox (S5)			
Histic Epipe	_	X Stripped Matrix (S6)		2 cm Muck (A1	0) (LRR B)
X Black Histic	(A3)	Loamy Mucky Mineral(F1)		Very Shallow D	ark Surface
Hydrogen S	ulfide (A4)	Loamy Gleyed Metrix (F2)		Red Parent Mai	berial (TF2)
	elow Derk Surface (A11	Depleted Matrix (F3)		Other (Explain i	in Remarks)
Thick Dark	Surface (A12)	Redax Dark Surface (F6)			
	elow Derk Surface (A11;	Depleted Dark Surface (F7)			regetation and wetland hydrolo
	ky Mineral (S1) ed Matrix (S4)	Redax Depressions (F8)	must be	present, unless d	isturbed or problematic.
Daniely Oley	ou matrix (O-1)				
Type: Depth (inches): Remarks:	in present.	H	ydric Boll Presen	Yes	Х Но
Type: Depth (inches): Remarks:	i presenty.	н	ydric Soll Presen	nt? Yes	XNo
Type: Depth (inches): Remarks:		н	ydric Boll Presen	Yes:	XNo
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology			ydric Boll Presen		X No
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology	Indicators: inimum of one required. c		ydric Soli Presen	Secondary Indice	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m	Indicators: inimum of one required. c A1)	heck all that apply)	ydric Soli Presen	Secondary Indice	ators (2 or more required) ined Leaves
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Primary Indicators (m. Surface Water (i.	Indicators: inimum of one required. c A1)	heck all that apply)Salt Crust (B11)Water Stained Leaves	ydric Soli Presen	Secondary Indice Water Sta	ators (2 or more required) ined Leaves
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Table Seturation (A3)	Indicators: inimum of one required. c A1) le (A2)	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13)	ydric Soli Presen	Secondary Indice Water Sta Raised An	ators (2 or more required) ined Leaves t Mounds ve Hummocks
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Seturation (A3) Water Marks (B	Indicators: inimum of one required, c A1) le (A2)	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1)		Secondary Indice Water Sta Raised An Frost Heav	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (B10)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Seturation (A3) Water Marks (B Sediment Depor	Indicators: inimum of one required. c A1) le (A2) 1) iibs (B2)	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit		Secondary Indice Water Sta Raised An Frost Heat Drainage I	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (B10) in Water Table (C2)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Seturation (A3) Water Marks (B Sediment Deposits (B	Indicators: inimum of one required, c A1) te (A2) 1) sits (B2)	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	ng Roots (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B	utors (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (810) on Water Table (C2)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Seturation (A3) Water Marks (B Sediment Deposits (B Surface Soil Cra	Indicators: inimum of one required. c A1) te (A2) 1) sits (B2) (3) tcks (B8)	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seeso Crayfish B Saturation	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C2)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Saturation (A3) Water Marks (B Sediment Depor	Indicators: inimum of one required. c A1) le (A2) 1) sits (B2) (3) icks (B6) le on Airrist Imagery (B7)	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recant Iron Reduction in Tilled St	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seeso Crayfish B Saturation Shallow As	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (O3)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Saturation (A3) Water Marks (B Sediment Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegeta	Indicators: inimum of one required, c A1) le (A2) 1) sits (B2) (3) loks (B6) le on Aerial Imagery (B7) ted Coecave Surface	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (810) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) ral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (inches): Saturation (A3) Water Marks (B Sediment Deport Drift Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegeta Algal Mat or Cru	Indicators: inimum of one required, c A1) le (A2) 1) sits (B2) (3) loks (B6) le on Aerial Imagery (B7) ted Coecave Surface	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recant Iron Reduction in Tilled St	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (O3)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Seturation (A3) Water Marks (B Sediment Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegeta	Indicators: inimum of one required, c A1) le (A2) 1) sits (B2) (3) loks (B6) le on Aerial Imagery (B7) ted Coecave Surface	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recant Iron Reduction in Tilled St	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (810) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) ral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (in Surface Water (id) High Water Table Saturation (A3) Water Marks (B Sediment Depon Drift Deposits (B Surface Soil (B Surface Soil (B) Sparslet Vegeta Algal Mat or Cru Iron Deposits	Indicators: inimum of one required; c A1) ie (A2) ii) sits (B2) iis) icks (B6) ie on Aerial Imagery (B7) ted Concave Surface	heck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recant Iron Reduction in Tilled St	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (810) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) ral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (i High Water Tabl Saturation (A3) Water Marks (B Sediment Depon Drift Deposits (B Surface Soil Cra Inundation Visibl Sparslet Vegeta Algal Mat or Cru Iron Deposits Field Observations:	Indicators: inimum of one required, cl A1) te (A2) 1) pits (B2) (3) cks (B6) te on Aprial Imagery (B7) ted Concave Surface st	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	ng Rooks (CS)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Patterns (810) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C2) quitard (D3) ral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water Tabl Seturation (A3) Water Marks (B Sediment Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegeta Algal Mat or Cru Iron Deposits Field Observations: Surface Water Present Water Table Present	Indicators: inimum of one required; c A1) le (A2) (1) sits (B2) (3) sits (B5) le on Aerial Imagery (B7) ted Concave Surface st (nt? Yels No _X D 7	heck all that apply) Salt Crust (B11) Water Stained Leaves Acquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants Other (Explain in Remarks)	ng Roots (C3) oils (C6)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shallow A FAC-Neuth	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (810) on Water Table (C2) surrows (C8) Visible on Aedial Imagery (C2) quitard (D3) rail Test (D5) sic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (rr Surface Water 16th Seturation (A3) Water Marks (B Sediment Depon Drift Deposits (B Surface Soil (B Surface	Indicators: inimum of one required; c A1) le (A2) 1) sits (B2) 13) locks (B6) le on Aerial Imagery (B7) ted Concave Surface st wh? Yeis No X D Yes X No D	heck all that apply) Salt Crust (B11) Water Stained Leaves Acquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants Other (Explain in Remarks)	ng Roots (C3) oils (C6)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shellow A FAC-Neut	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (810) on Water Table (C2) surrows (C8) Visible on Aedial Imagery (C2) quitard (D3) rail Test (D5) sic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water Tabl Seturation (A3) Water Marks (B Sediment Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegeta Algal Mat or Cru Iron Deposits Field Observations: Surface Water Present Water Table Present	Indicators: inimum of one required; c A1) le (A2) 1) sits (B2) 13) locks (B6) le on Aerial Imagery (B7) ted Concave Surface st wh? Yeis No X D Yes X No D	heck all that apply) Salt Crust (B11) Water Stained Leaves Acquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants Other (Explain in Remarks)	ng Roots (C3) oils (C6)	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shellow A FAC-Neut	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (810) on Water Table (C2) surrows (C8) Visible on Aedial Imagery (C2) quitard (D3) rail Test (D5) sic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (High Water Tabl Seturation (A3) Water Marks (B Sediment Depon Drift Deposits (B Surface Soil Crail Inundation Visibl Sparslet Vegeta Algal Mat or Cru Iron Deposits Field Observations: Surface Water Preset Water Table Present? (includes capillary frie	Indicators: inimum of one required; cl A1) le (A2) 1) pits (B2) (3) lcks (B6) le on Aprial Imagery (B7) ted Concave Surface st wit? Yels No X D Yes X No D Inge)	heck all that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants Other (Explain in Remarks)	ng Rooks (C3) oils (C8) Wetland Hydrolog	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shellow A FAC-Neut	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (810) on Water Table (C2) surrows (C8) Visible on Aedial Imagery (C2) quitard (D3) rail Test (D5) sic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators (m Surface Water (High Water Tabl Saturation (A3) Water Marks (B Sediment Depon Drift Deposits (B Surface Soil Cra Inundation Visib Sparslet Vegete Algal Mat or Cru Iron Deposits Field Observations: Surface Water Preset Water Table Present? Saturation Present? (includes capillary frie	Indicators: inimum of one required; cl A1) le (A2) 1) pits (B2) (3) lcks (B6) le on Aprial Imagery (B7) ted Concave Surface st wit? Yels No X D Yes X No D Inge)	heck all that apply) Salt Crust (B11) Water Stained Leaves Acquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants Other (Explain in Remarks)	ng Rooks (C3) oils (C8) Wetland Hydrolog	Secondary Indice Water Sta Reised An Frost Heav Dry-Seaso Craylish B Saturation Shellow A FAC-Neut	ators (2 or more required) ined Leaves t Mounds ve Hummocks Petterns (810) on Water Table (C2) surrows (C8) Visible on Aedial Imagery (C2) quitard (D3) rail Test (D5) sic Position

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

pplicant/Owner: Michael Kuhl					npling Point: WD-9		
vestigator(s): Jeremy Wakes,	Summer Ahel		_		pe: Section 16, T1	2N. R14E	
andform (hillslope, terrace, etc.):					nvex. none): non		ope (%):
ubregion (LRR): D	hills				e: -120.4142 Det		ope (10).
		_		_			
oil Map Unit Name: Pilliken co					rsification: None		
re climatic / hydrologic conditions							
re Vegetation, Soil_	, or Hydrology	significently dist	urbed?	Are Nor	mal Circumstances" pr	esent? Yes? X	No
re Vegetation . Soil	, or Hydrology	naturally problem	matic?	(If needs	d explain any answer	in Remarks.)	
UMMARY OF FINDINGS - Atta	ch site map showing	sampling point	ocations, tr	ansects, Impo	ortant features, etc.		
ydrophytic Vegetation Present?	Yes X	No	is the Sa	mpled Area w	ithin a		
ydric Soll Present?	Yes X	No		Wetland?	Yes	X No	
Vetland Hydrology Present?	Yes X	No					
emarks:							
COTTATION II							
EGETATION - Use scien	tific names of pla						
Distance (Distance)	,	Absolute %	Dominant		Number of Domina	ence Test works	neet:
1. Pinus jeffreyii)	Cover	Species?	Status	That Are OBL, FAC		2 (A)
2.					111111111111111111111111111111111111111	_	
3					Total Number of De	ominent	
4					Species Across All	Strate:	2 (B)
		5	Total Cover			. Harris	
apling/Shrub Stratum (Plot size 1. Rhododendron occidentale)			FAC	Percent of Dominal That Are OBL, FAC		100% (A/B)
				FAC	THE AP OBL. PAG		(700)
3.							
4.							
5.							
		0	Total Cover		Prevale	ence Index works	heet:
lerb Stratum (Plot size:)				Total % Cover of:		
1 Bistorte bistortoides		10		FACW	OBL species	23 × 1 =	23
2 Scirpus microcarpus		20	Y	OBL	FACW species	13 × 2 =	26
3. Veratrum californicum		2		FAC	FAC species	42 x 3 =	126
4. Erythranthe gutteta		3		OBL	FACU species	0 x 4 =	0
5. Poe pretensis		40	Y	FAC	UPL species	0 x 5 =	0
6. Camassia leichthnii ssp. zuk	adorfii	3		FACW	Column Totals:	(A)	175 (
7.							
в					Prevalence inc	dex = B/A =	2.24
		78	Total Cover				
Voody Vine Stratum (Plot size:)				Hydrophy	tic Vegetation Ind	licators:
1.					X Dominance To	est is >50%	
2.					X Prevalence in	dex is ≤3.0 ¹	
		0	Total Cover			Adaptations (Pro	
						rks or on a separat	
6 Bare Ground in Herb Stratum	5	% Co	ver of Biotic	Crust	Problematic H	lydrophytic Vegeta	tion¹ (Explain)
	- Turnda - u						
Hydrophytic Vegetation Pr	resent?						
Yes X No							

Western Mountains. Valleys and Coast Region

(inches) Cok	Metrix or (moist)	% Color (moist) % T	ype LOC	Texture Remarks
2 7.5 YR 3		76 Color (moist) 76 I	уре гос	Mucky loam
7.0110				744317
Type, ChiConcer bation, DhiCept	e.cr RM=Reduced V	utns. ² Locetion FL=Pore Linnig, RC=Root C	harnel, M=Matrix.	
lydric Soil Indicators: (App X Histosol (A1)	plicable to all LRR	s, unless otherwise noted.) Indicators for Sendy Redox (S6)	r Problematic H	lydric Bolls³:
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
Black Histic (A3)		X Loamy Mucky Mineral(F1)		Very Shallow Dark Surface
Hydrogen Sulfide (A	M6)	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
Depleted Below Day	rk Surface (A11	Depleted Matrix (F3)		Other (Explain in Remarks)
Thick Dark Surface		Redax Dark Surface (F6)		
Depleted Below Des	- continues	Depleted Dark Surface (F7)		ors of hydrophytic vegetation and wetland hydrok present, unless disturbed or problematic.
Sandy Mucky Miner Sandy Gleyed Matri	-	Redax Depressions (F8)	must de	present, unless disturbed or problematic.
Restrictive Layer (if prese	nt):			
mayor to proof				
Туре:		_		
		Hy	rdric Soll Preser	nt? Yes X No
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicato			rdric Soll Preser	
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicato			rdric Soll Preser	Secondary Indicators (2 or more required)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum			rdric Soll Preser	
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator		eck all that apply)	ntric Soli Preser	Secondary Indicators (2 or more required)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2)		eck all that apply)Salt Crust (B11)	ntric Soli Preser	Secondary Indicators (2 or more required) Water Stained Leaves
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicato Primary Indicators (minimum K Surface Water (A1) K High Water Table (A2)		eck all that apply)Salt Crust (B11)Water Stained Leaves	ntric Soli Preser	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator rimary Indicators (minimum K Surface Water (A1) K High Water Table (A2) K Saturation (A3)	of one required; che	eck all that apply)Salt Crust (B11)Water Stained LeavesAquatic Invertebrates (B13)		Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Frimary Indicators (minimum K Surface Water (A1) K High Water Table (A2) K Seturation (A3) Water Marks (B1)	of one required; che	eck all that apply)Salt Crust (B11)Water Stained LeavesAquatic Invertebrates (B13)Hydrogen Sulfide Odor (C1)		Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Frimary Indicators (minimum K. Surface Water (A1) K. High Water Table (A2) K. Seturation (A3) Water Marks (B1) Sediment Deposits (B2)	of one required, ch	eck all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	of one required, chi	eck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Froet Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator rimary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6)	of one required; che	eck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Imagery (C2)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Frimary Indicators (minimum K Surface Water (A1) K High Water Table (A2) K Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6) Inundation Visible on Ae	of one required; che	sck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Froet Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Imagery (C2:
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6 Inundation Visible on Aa Sparslet Vegetated Con	of one required; che	sck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2: Shallow Aquitand (D3) FAC-Neutral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicator Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6 Inundation Visible on Aa Sparslet Vegetated Con Algal Mat or Crust Iron Deposits Field Observations:	of one required; cha) rial Imagery (B7) cave Surface	sck all that apply) Selt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Livin, Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2: Shallow Aquitand (D3) FAC-Neutral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Seturation (A3) Sufface Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B5 Inundation Visible on As Sparslet Vegetated Con Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes	of one required; chi	sck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin, Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants. Other (Explain in Remerks)	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2: Shallow Aquitand (D3) FAC-Neutral Test (D5)
Type: Depth (inches): Remarks: HYDROLOGY Wettand Hydrology Indicate Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B5 Inundation Visible on As Sparslet Vegetated Con Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes Water Table Present? Yes	of one required; chi	sck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin, Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants. Other (Explain in Remerks)	g Roots (C3)	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Froet Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2 Shallow Aquitand (D3) FAC-Neutral Test (D5) Geomorphic Position
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Surface Soil Cracks (B6 Inundation Visible on As Sparslet Vegeteted Con Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	of one required; charles of one required; char	eck all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin, Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants. Other (Explain in Remerks)	g Roots (C3) ils (C6) etlend Hydrolog	Secondary Indicators (2 or more required) Water Stained Leaves Raised Ant Mounds Froet Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2 Shallow Aquitand (D3) FAC-Neutral Test (D5) Geomorphic Position

Western Mountains. Valleys and Coast Region

Project/Site: Union Valley			City/County:	El Dorado	Sampling	Date: 6/20/20	324
Applicant/Owner: Michael Kuhl					npling Point: WD-10		
nvestigator(s): Jeremy Waites, Su	mmer Abel		Section, T	ownship. Rang	ge: Section 16, T12	N. R14E	
andform (hillstope, terrace, etc.):		lope			nvex, none): none		liope (%):
Subregion (LRR): D			_		e: -120.4142 Detur		
Soil Map Unit Name: Pilliken coars	se sandy loam, 5 to 3				ssification: None		
Are climatic / hydrologic conditions of					o (If no, explain in	Remarks.)	
ve Vegetation, Soil					mal Circumstances" pre-		No
	_	-			d explain any answers i	_	
SUMMARY OF FINDINGS - Attach Hydrophytic Vegetation Present?			ocazons, tr	arisects, impo	ortant readures, etc.		
Hydric Sail Present?		No X	is the Ba	mpled Area w	ithin a Yes	No X	
Wetland Hydrology Present?	Yes	No X		Wetland?			
Remarks:						· · · · · · · · · · · · · · · · · · ·	
VEGETATION - Use scientif	fic names of pla	ints					
		Absolute %	Dominant	Indicator		nce Test works	heet:
ree Stratum (Plot size:)	Cover	Species?	Statue	Number of Dominant		0 (4)
Celocedrus decurrens Pinus jeffreyii		40			That Are OBL, FACV	V, OF FAC:	0 (A)
3. Pinus ponderosa		60	X	FACU	Total Number of Don	ninent	
4. Abies concolor		2			Species Across All S	trata:	1 (B)
		112	otal Cover				
Sapling/Shrub Stratum (Plot size:)				Percent of Dominant		044 (4.49)
1. Rhododendron occidentale		3		FAC	That Are OBL, FACV	V, or FAC:	0% (A/B)
2							
4							
6.							
		3 1	otal Cover		Prevaler	ce Index works	sheet:
Herb Stratum (Plot size:)				Total % Cover of:	Multipl	
1. Tarexacum officinale		2		FACU	OBL species	0 × 1 ×	0
2. Chrysolepis sempervirens				-	FACW species	0 x 2 =	0
3. Equisetum arvense		2		FAC	FAC species	5 x 3 =	15
4. Hypericum perforatum		5		FACU	FACU species	67 × 4 =	268
5. Collomia grandillora		3		-	UPL species	x 5 =	0
6.					Column Totals:	72 (A)	283 (8
7							
8					Prevalence Inde	x = B/A =	3.93
		17	Total Cover				
Woody Vine Stratum (Plot size:	>				Hydrophytic	Vegetation Inc	dicators:
1					Dominance Tes	t in >50%	
2					Prevalence Inde		
			Total Cover		Morphological /		
% Bare Ground in Herb Stratum	70	% Co.	ver of Biotic	Crust		drophytic Vegeta	
Hydrophytic Vegetation Pres	- 42	-					

Western Mountains. Valleys and Coast Region

(inches)	Matrix Color (moist)	% Color (moist) %	Type LOC	Texture	Remarks
(HICHES)	5 YR 3/3	100	1900	sandy loam	100111111111111111111111111111111111111
4	5 T K 3/3	100		Sandy Idam	
yoe. C=Concer tra	tor EmDephalor RM=Reduce	d Matrix. Location FL=Pers Linking, RC=Rbe	t Charnel, M=Matin		
ivdric Soil Indica	itors: (Applicable to all Li	RRs, unless otherwise noted.) Indicators	for Problematic	tydric Solis ³ :	
Histosol		Sandy Radox (S5)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	eipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LR	RB)
Black Hi		Loamy Mucky Mineral(F1)		Very Shallow Dark St	urface
Hydroge	n Sulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Material	(TF2)
	Below Dark Surface (A11	Depleted Matrix (F3)		Other (Explain in Ren	. ,
	urk Surface (A12)	Redax Dark Surface (F6)			
	Balow Dark Surface (A11)	Depleted Dark Surface (F7)		tors of hydrophytic vegeta present, unless disturb	
	lucky Mineral (S1) leyed Matrix (S4)	Redox Depressions (F8)	must b	present, unless disturb	ed or problematic.
Restrictive Lay	er (If present):				
Type:	er (If present):				
			Hydric Soil Prese	rit? Yes	No_X_
Type: Depth (inches	a):		Hydric Soli Prese	rit? Yes	No_X_
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo	gy Indicators:		Hydric Soli Prese	Yes	
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators	gy Indicators:	check all that apply)	Hydric Soll Prese		2 or more required)
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators Surface Wate	gy Indicators: (minimum of one required; er (A1)	check all that apply)Salt Crust (B11)	Hydric Soll Prese	Secondary Indicators (2 or more required)
Type: Depth (inches) Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water 1	gy Indicators: (minimum of one required; or (A1) able (A2)	check all that apply)Salt Crust (B11)Water Steined Leaves	Hydric Soll Prese	Secondary Indicators (2 or more required) eaves
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water 1 Seturation (A	gy Indicators: (minimum of one required; er (A1) able (A2)	check all that apply)Salt Crust (B11)Water Stained LeavesAquatic Invertebrates (B13)	Hydric Soll Prese	Secondary Indicators (Water Stained L Relead Ant Mou	2 or more required) eaves inds immocks
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks	gy Indicators: (minimum of one required; er (A1) able (A2) 3) (B1)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B15) Hydrogen Sulfide Odor (C1)		Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter	2 or more required) eaves inds immocks ins (810)
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De	gy Indicators: (minimum of one required; er (A1) able (A2) 3) (B1) posits (B2)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic Invertebrates (B15) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Like		Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter	2 or more required) eaves inds immocks ins (810) ter Table (C2)
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De	gy Indicators: (minimum of one required; er (A1) able (A2) 3) (B1) posits (B2) a (B3)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4)	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow	2 or more required) eaves inds inds inmocks ins (B10) ter Teble (C2) is (C8)
Type: Depth (incher Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil	gy Indicators: (minimum of one required; or (A1) able (A2) 3) (B1) posits (B2) s (B3) Cracks (B6)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibo	2 or more required) .eaves inds mmocks ns (B10) ter Teble (C2) s (C8) le on Aerial Imagery (C2)
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI	gy Indicators: (minimum of one required; er (A1) able (A2) 3) (B1) posits (B2) a (B3) Cracks (B6) sible on Aerial Imagery (B7)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi	2 or more required) eaves inds inds inmocks ins (B10) ter Table (C2) is (C9) te on Aerial Imagery (C2) d (D3)
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg	gy Indicators: (minimum of one required; er (A1) able (A2) 3) (B1) posits (B2) a (B3) Cracks (B6) sibble on Aerial Imagery (B7	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi Shallow Aquitar FAC-Neutral Te	2 or more required) eaves inds inds inmocks ins (810) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5)
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg Algal Met or	gy Indicators: (minimum of one required; or (A1) (able (A2) 3) (B1) posits (B2) a (B3) Cracks (B6) mible on Aerial Imagery (B7 eteted Concave Surface	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi	2 or more required) eaves inds inds inmocks ins (810) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5)
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg	gy Indicators: (minimum of one required; or (A1) (able (A2) 3) (B1) posits (B2) a (B3) Cracks (B6) mible on Aerial Imagery (B7 eteted Concave Surface	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi Shallow Aquitar FAC-Neutral Te	2 or more required) eaves inds inds inmocks ins (810) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5)
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo rimery Indicators Surface Watt High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg Algal Met or Iron Deposits	gy Indicators: (minimum of one required; er (A1) (able (A2) (3) (B1) posits (B2) (a (B3) Cracks (B6) mible on Aerial Imagery (B7 eteled Concave Surface Crust	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3	ring Roots (C3)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi Shallow Aquitar FAC-Neutral Te	2 or more required) eaves inds inds inmocks ins (810) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5)
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg Algal Mat or Iron Deposits	gy Indicators: (minimum of one required; or (A1) able (A2) 3) (B1) posits (B2) s (B3) Cracks (B6) cracks (B6) sible on Aerial Imagery (B7 etated Concave Surface Crust is posity Yes No X	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Other (Explain in Remarks) Depth (inches)	ving Roots (C3) Soils (C6)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visib Shallow Aquitar FAC-Neutral Te Geomorphic Po	2 or more required) eaves inds inds inmocks ins (B10) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5) sition
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators Surface Wate High Water T Seturation (Ark Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg Algal Met or Iron Deposits Iron Deposits Field Observatio Surface Water Pre Nater Table Pres	gy Indicators: (minimum of one required: er (A1) (able (A2) (3) (B1) (B3) (Cracks (B6) (Sible on Aerial Imagery (B7 etated Concave Surface (Crust (Cr	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Other (Explain in Remarks) Depth (inches) Depth (inches)	ving Roots (C3) Soils (C6)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visibi Shallow Aquitar FAC-Neutral Te	2 or more required) eaves inds inds inmocks ins (B10) ter Teble (C2) is (C8) le on Aerial Imagery (C2) d (D3) st (D5) sition
Type: Depth (inches Remarks: HYDROLOGY Netland Hydrolo Primary Indicators Surface Watt High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation VI Sparslet Veg Algal Mat or Iron Deposits	gy Indicators: (minimum of one required; er (A1) (able (A2) .3) (B1) posits (B2) a (B3) Cracks (B6) (sible on Aerial Imagery (B7 eteled Concave Surface Crust ins: seant? Yes No X dr? Yes No X	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Other (Explain in Remarks) Depth (inches) Depth (inches)	ving Roots (C3) Soils (C6)	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visib Shallow Aquitar FAC-Neutral Te Geomorphic Po	2 or more required) eaves inds inds inmocks ins (B10) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5) sition
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation Vi Sparslet Veg Algal Mat or Iron Deposits Field Observatio Surface Water Pn Vater Table Pres Saturation Preser includes capillary	gy Indicators: (minimum of one required: or (A1) able (A2) 3) (B1) posits (B2) s (B3) Cracks (B6) risble on Aerial Imagery (B7 eteted Concave Surface Crust is assent? Yes No X ent? Yes No X if inge)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lie Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Other (Explain in Remarks) Depth (inches) Depth (inches)	ving Roots (C3) Soils (C8) Wedland Hydrolo	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visib Shallow Aquitar FAC-Neutral Te Geomorphic Po	2 or more required) eaves inds inds inmocks ins (B10) ter Table (C2) is (C8) te on Aerial Imagery (C2) d (D3) st (D5) sition
Type: Depth (inches Remarks: HYDROLOGY Vetland Hydrolo Primary Indicators Surface Wate High Water T Seturation (A Water Marks Sediment De Drift Deposits Surface Soil Inundation Vi Sparslet Veg Algal Mat or Iron Deposits Field Observatio Surface Water Pn Vater Table Pres Saturation Preser includes capillary	gy Indicators: (minimum of one required: or (A1) able (A2) 3) (B1) posits (B2) s (B3) Cracks (B6) risble on Aerial Imagery (B7 eteted Concave Surface Crust is assent? Yes No X ent? Yes No X if inge)	check all that apply) Salt Crust (B11) Water Stained Leaves Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Other (Explain in Remarks) Depth (inches) Depth (inches)	ving Roots (C3) Soils (C8) Wedland Hydrolo	Secondary Indicators (Water Stained L Relead Ant Mou Froat Heave Hu Drainage Patter Dry-Season We Crayfish Burrow Saturation Visib Shallow Aquitar FAC-Neutral Te Geomorphic Po	2 or more required) eaves inds inds inmocks ins (B10) ter Teble (C2) is (C8) le on Aerial Imagery (C2) d (D3) st (D5) sition

Western Mountains. Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Union Valley	City/County: El Dorado	
opticant/Owner: Michael Kuhl		npling Point: WD-11
vestigator(s): Jeremy Waites, Summer Abel	Section, Township, Rang	ge: Section 16, T12N, R14E
andform (hillstope, terrace, etc.);	hillslope Local relief (concave, co	nvex, none): none Slope (%):
abregion (LRR): D	Latitude: 38.879483□ Longitud	e: -120.4142 Datum: WGS84
oil Map Unit Name: Pilliken coarse sandy loa	n, 5 to 30 percent slopes NWI class	ssification: None
e climatic / hydrologic conditions on the site typ		lo(If no, explain in Remarks.)
		mal Circumstances' present? Yes? X No
		ed, explain any answers in Remarks.)
	owing sampling point locations, transects, impo	ortant features, etc.
	is the Sampled Area w	rithin a Yes No X
	es No X Wetland?	149 140 X
emarks:	- NO A	
EGETATION - Use scientific names	of plants	
	Absolute % Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:) Cover Species? Status	Number of Dominant Species
1. Calocedrus decurrens	40	That Are OBL, FACW, or FAC: 0 (A)
2.		
3. Pinus ponderose	40 X FACU	Total Number of Dominant
4. Abies concolor	10 -	Species Across All Streta: 1 (B)
apling/Shrub Streturn (Plot size:	90 Total Cover	Percent of Dominant Species
1	-	That Are OBL, FACW, or FAC: 0% (A/B)
2		
3		
4.		
5.		
	0 Total Cover	Prevalence index worksheet:
erb Stratum (Plot size:)	Total % Cover of: Multiply by:
Adenocauton bicolor	5 -	OBL species 0 x 1 = 0
Ribes roezlii var. roezlii		FACW species 0 x 2 = 0
3. Equiselum arvense	20 FAC	FAC species 20 x 3 = 60
Goodyere oblongifolia	f FACU	FACU species 40 x 4 = 160
5. Gelium trillorum	1 FACU	UPL species x 5 =0
6.		Column Totals: 60 (A) 220
7		
8.		Prevalence Index = 8/A = 3.67
	28 Total Cover	
Foody Vine Stratum (Plot size:)	Hydrophytic Vegetation Indicators:
1		Dominance Test is >50%
2		Prevalence Index is ≤3.0°
2-	0 Total Cover	Morphological Adaptations (Provide supportir
	102100481	data in Remarks or on a separate sheet)
Bare Ground in Herb Stratum 60	% Cover of Biolic Crust	Problematic Hydrophytic Vegetation ¹ (Explain)
Hydrophytic Vegetation Present?		
Yes No X		
		2000088000000

Region

rofile Description:		THE CONTRACTOR OF THE CONTRACT		Sampling Point: WD-11
		needed to document the indicator or o		ce of Indicators.)
Depth	Matrix	Redox Feat		2 Texture Remarks
(inches) 5	Calor (moist)	% Color (moist) %	Type LOC	sandy loam
2	YR 3/8	100		Sandy loan
Contract Contract Line Contract	. D=Depletor RM=Reduced	Metrix. ² Location FL=Pore Litric, Rt.=	ted Chartel MeMal	
754. 5-5 FIGHT B 21 CF	D. Debiatol, Kwakannoan	Metric Locator PL-Poly Lift No. 11.	oct Charlet, w-wied	15
ydric Soll Indicator	s: (Applicable to all LR	Rs, unless otherwise noted.) Indicato	rs for Problematic	: Hydric Soils³:
Histosol (A1)	Sandy Redox (S5)		
Histic Epipe	don (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
Black Histic	(A3)	Loamy Mucky Mineral(F1)		Very Shallow Dark Surface
Hydrogen S	ulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
	elow Dark Surface (A11	Depleted Matrix (F3)		Other (Explein in Remarks)
	Surface (A12)	Redox Dark Surface (F8)		
	elow Dark Surface (A11;_	Depleted Dark Surface (F7)		ators of hydrophytic vegetation and wetland hydrolo
	xy Mineral (S1) ed Matrix (S4)	Redox Depressions (F8)	must	be present, unless disturbed or problematic.
Sally Gley	ed matrix (S4)			
Restrictive Layer (I	f present):			
Тура:				
Depth (inches):			Hydric Soll Pres	sent? Yes No X
HYDROLOGY Vetland Hydrology I	Indicators :			
	inimum of one required; of	heck all that apply)		Secondary Indicators (2 or more required)
Surface Water (A		Selt Crust (B11)		
High Water Table		Date Order (D11)		Water Stained Leaves
Lings agents 1 apr		Water Chainad Lanuar		Water Stained Leaves Rejeart Apt Mounds
D-1	e (A2)	Water Stained Leaves		Raised Ant Mounds
Seturation (A3)		Aquatic Invertebrates (B13)		Reised Ant Mounds Frost Heave Hummocks
Water Marks (B1	n	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10)
Water Marks (B1 Sediment Depos	l) its (B2)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along		Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1 Sediment Depos Drift Deposits (B	1) ilts (B2) 3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C-	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Water Marks (B1 Sediment Depos	1) ilts (B2) 3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2)
Water Marks (B1 Sediment Depos Drift Deposits (B Surface Soil Cra	1) ilts (B2) 3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Water Marks (B1 Sediment Deposits (B Drift Deposits (B Surface Soil Cra Inundation Visible	1) iits (B2) 3) oks (B6)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2)
Water Marks (B1 Sediment Deposits (B Drift Deposits (B Surface Soil Cra Inundation Visible	ilts (B2) dks (B6) dks (B6) e on Aerial Imagery (B7) ted Concave Surface	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Prizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3)
Water Marks (B1 Sediment Depos Drift Deposits (B Surface Soil Cra Inundation Visible Sparslet Vegetat	ilts (B2) dks (B6) dks (B6) e on Aerial Imagery (B7) ted Concave Surface	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Prizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (84 Sediment Deposits (85 Surface Soil Cra- Inundation Visible Sparslet Vegetat Algal Mat or Cru- Iron Deposits	its (B2) 3) cks (B5) cks (B5) e on Aerial Imagery (B7) ted Concave Surface st	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Prizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (84 Sediment Depos Drift Deposits (8 Surface Soil Cre Inundation Visibi Sparslet Vegetat Algal Mat or Cru Iron Deposits Steld Observations:	I) iits (B2) 3) cks (B6) ie on Aerial Imagery (B7) ted Concave Surface	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks)	4)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (81 Sediment Deposits (8 Surface Soil Cra- Inundation Visibi Sparslet Vegetat Algal Mat or Cru- Iron Deposits Field Observations: Surface Water Prese	its (B2) 3) cks (B5) le on Aerial Imagery (B7) ted Concave Surface st	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Stunted or Stressed Plents Other (Explain in Remarks)	4) d Sails (C8)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (81 Sediment Deposits (8 Surface Soil Cra- Inundation Visibi Sparslet Vegetat Algal Mat or Cru- Iron Deposits Field Observations: Surface Water Prese	I) iits (B2) 3) cks (B6) ie on Aerial Imagery (B7) ted Concave Surface	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recant Iron Reduction in Tille Stunted or Stressed Plents Other (Explain in Remarks)	4) d Sails (C8)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position
Water Marks (81 Sediment Deposits (8 Surface Soil Cra- Inundation Visible Sparslet Vegetat Algal Mat or Cru- Iron Deposits Field Observations: Surface Water Present	ists (B2) 3) cks (B5) ie on Aerial Imagery (B7) ted Concave Surface st nt? YesNo _XI YesNo _XI YesNo _XI	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recant Iron Reduction in Tille Stunted or Stressed Plents Other (Explain in Remarks)	4) d Sails (C8)	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position
Water Marks (84 Sediment Depos Drift Deposits (8 Surface Soil Cre Inundation Visible Sparslet Vegetat Algal Met or Cru Iron Deposits Surface Water Prese Vater Table Present? Saturation Present? includes capillary frin	oits (B2) 3) cks (B5) le on Aerial Imagery (B7) led Concave Surface st nt? Yes No X 1 Yes No X 1 Yes No X 1 Yes No X 1	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recant Iron Reduction in Tille Stunted or Stressed Plents Other (Explain in Remarks)	4) d Soils (C8) Wetland Hydrol	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position
Water Marks (84 Sediment Depos Drift Deposits (8 Surface Soil Cre Inundation Visible Sparslet Vegetat Algal Mat or Cru Iron Deposits Vater Table Present Saturation Present? includes capillary fin	oits (B2) 3) cks (B5) le on Aerial Imagery (B7) led Concave Surface st nt? Yes No X 1 Yes No X 1 Yes No X 1 Yes No X 1	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Title Stunted or Stressed Plants Other (Explain in Remarks) Pepth (inches)	4) d Soils (C8) Wetland Hydrol	Reised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position

Western Mountains, Valleys and Coast Region

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

pplicant/Owner: Michael Kuhl		State: CA Sar	mpling Point: WD-12
vestigator(s): Jeremy Waites, Summer Abel		Section, Township. Ran	ge: Section 16, T12N, R14E
andform (hillslope, terrace, etc.):	nillslope	Local relief (concave, co	
abregion (LRR): D		ma .	le: -120.4129 Datum: WGS84
oil Map Unit Name: Pilliken coarse sandy loam, 5			ssification: None
re climatic / hydrologic conditions on the site typical			to(if no, explain in Remarks.)
re Vegetation , Soll , or Hydrology			rmal Circumstances" present? Yes? X No
re Vegetation, Soil, or Hydrology_	naturally problem	natic? (If needs	rd. explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site map show	ng sampling point i	ocations, transects, Impe	ortant features, etc.
ydrophytic Vegetation Present? Yes	X No		
	X No	is the Sampled Area w Wetland?	Yes X No
fetland Hydrology Present? Yes	X No	, vectories	
emarks:			
EGETATION - Use scientific names of	plants		
	Absolute %	Dominant Indicator	Dominance Test worksheet:
ee Stratum (Plot size:	Cover	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: 1 (A)
3.	-		Total Number of Dominant
4	-		Species Across All Streta: 1 (B)
1	0 7	otal Cover	opening year old year old and
apling/Shrub Stratum (Plot size:)		Percent of Dominant Species
Alnus incana ssp. tenuifolia	25	FACW	That Are OBL, FACW, or FAC: 100% (A/B)
2			
3.			
4.			
6.			
	25	otal Cover	Prevalence Index worksheet:
erb Stratum (Plot size:)		Total % Cover of: Multiply by:
1 Equisetum arvense	50	X FAC	OBL species 10 x 1 = 10 FACW species 40 x 2 = 90
2. Artemisia douglasiana	- 5	FACW	
3 Erythrenthe guttata	- 5	OBL	FAC species 70 x 3 = 210
4. Scirpus microcarpus	5	OBL	FACU species 1 × 4 = 4
Pteridium aquilinum var. pubescens	1	FACU	UPL species x 5 = 0
6. Poe pretensis	20	FAC	Column Totals: 121 (A) 304 (E
7. Senecio triangularis	10	FACW	
8.			Prevalence Index = B/A = 2.51
	96	Total Cover	
loody Vine Stratum (Plot size:			Hydrophytic Vegetation Indicators:
A STREAM (PICK Size.	,		
			X Dominance Test is >50%
2.			X Prevalence Index is ≤3.01 Morphological Adaptations (Provide supporting
	0	Total Cover	data in Remarks or on a separate sheet)
Bare Ground in Herb Stratum 0	% Cm	ver of Biolic Crust	Problematic Hydrophytic Vegetation¹ (Explain)
- Serie Ground III Fred October 1	76 000		
Hydrophytic Vegetation Present?			
Yes X No			

Western Mountains, Valleys and Coast Region

(inches) Co	Metrix	%	Redox Features Color (moist) % T	ype LOC'	Texture Remarks	
(inches) Cr	alor (moist)	100	Color (moist) % T	ype LOC'		_
5 YR 3/		100			Loarny muck	
						_
Type, C=Concer tration, E=De	elater DM-Dmanus	1 Maine	² Legación FE-Peny Uning, 45-45el C	harrist M=Matrix		
1999. C -55 feet 6 21 01 ; E- 56	planti Por Haditia	a wiether	CCB 31 PC -COSCITIO, 40 4300	THE THE THE THE THE		
Hydric Soil Indicators: (A	pplicable to all LR	Rs, unic	ess otherwise noted.) Indicators fo	r Problematic H	ydric Solis ³ :	
Histosol (A1)	_	X	Sandy Radox (S5)			
Histic Epipedon (/	12)		Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)	
Black Histic (A3)			Loamy Mucky Mineral(F1)		Very Shallow Dark Surface	
Hydrogen Sulfide	_		Loamy Gleyed Matrix (F2)		Red Perent Material (TF2)	
Depleted Below D	,		Depleted Matrix (F3)		Other (Explain in Remarks)	
Thick Dark Surface Depleted Below D			Redox Dark Surface (F6) Depleted Dark Surface (F7)	34. 4	rs of hydrophytic vegetation and wedland	bu adam law
X Sandy Mucky Min	98	X	Redox Depressions (F8)		rs of hydrophytic vegetation and wederid present, unless disturbed or problematic.	
Sandy Gleyed Ma	-				,	
Restrictive Layer (If pres	sert):					
Туре:	sent):				- W W W	
	ert):		. Hy	rdric Soll Presen	t? Yes_X_ No	-
Type: Depth (inches): Remarks:	erit):		. Hy	rdric Soll Presen	#? Yes X No	-
Type: Depth (inches): Remarks:			, hy	vdric Soli Presen	R? Yes X No	-
Type: Depth (inches): Remarks:	tors:	check all		vdric Soll Presen	Yes X No Secondary Indicators (2 or more require	d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica	tors:	check all		rdric Soll Presen		-
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators (minimum	tors: m of one required; o	check all	that apply)	ndric Soli Presen	Secondary Indicators (2 or more required	d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators (minimum Surface Water (A1)	tors: m of one required; o	check all	that apply) Salt Crust (811)	ndric Soli Presen	Secondary Indicators (2 or more required Water Stained Leaves	d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2)	tors: m of one required; o	check all	that apply) Salt Crust (811) Water Stained Leaves	ndric Soli Presen	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds	- d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3)	tors: m of one required; o	check all	that apply) Salt Crust (811) Water Steined Leaves Aquatic invertebrates (813)		Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks	- d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	tors: m of one required; o	check all	that apply) Salt Crust (811) Water Steined Leaves Aquatic invertebrates (813) Hydrogen Sulfide Odor (C1)		Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (810)	d)
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	tors: m of one required; o	check all	that apply) Salt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Sesson Water Table (C2)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B	tors: m of one required; o		that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Sesson Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B	tore: m of one required; of 2) Secial Imagery (B7)		that apply) Salt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sol	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B Inundation Visible on A Sparslet Vegetated Co	tore: m of one required; of 2) Secial Imagery (B7)		that apply) Salt Crust (811) Water Stained Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B	tore: m of one required; of 2) Secial Imagery (B7)		that apply) Salt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sol	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Crecks (B Inundation Visible on A Sparslet Vegetated Co Algal Mat or Crust	tore: m of one required; of 2) Secial Imagery (B7)		that apply) Salt Crust (811) Water Steined Leaves Aquatic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sol	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Crecks (B Inundation Visible on A Sparslet Vegetated Co Algal Mat or Crust Iron Deposits Field Observations:	tors: m of one required; of post of the control of		that apply) Salt Crust (811) Water Steined Leaves Aquatic invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sol Stunted or Stressed Plants Other (Explain in Remarks)	g Roots (C3)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Crecks (B Inundation Visible on A Sparslet Vegetated Co Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Ye	tors: m of one required; of the second secon	Depth (in	that apply) Salt Crust (811) Water Stained Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sol Stunted or Stressed Plants Other (Explain in Remarks)	ig Rooks (CS)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B Inundation Visible on A Sparslet Vegetated Co Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Y Water Table Present? Y	ators: m of one required; of one require	Depth (in	that apply) Salt Crust (811) Water Stained Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol Stunted or Stressed Plants Other (Explain in Remarks)	ig Rooks (CS)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Drift Deposits (B3) Surface Soil Credrs (B Inundation Visible on A Sparslet Vegetade Co Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Ye Water Table Present? Ye Vater Table Present? Ye Saturation Present?	tors: m of one required; of the second secon	Depth (in	that apply) Salt Crust (811) Water Stained Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol Stunted or Stressed Plants Other (Explain in Remarks)	ig Rooks (CS)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Surface Soil Credits (B Inundation Visible on A Sparslet Vegetated Co Algal Mat or Crust Iron Deposits Field Observations: Surface Water Present? Y Water Table Present? Y	ators: m of one required; of one require	Depth (in	that apply) Salt Crust (811) Water Stained Leaves Aquetic Invertebrates (813) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol Stunted or Stressed Plants Other (Explain in Remarks)	ig Rooks (CS)	Secondary Indicators (2 or more required Water Stained Leaves Raised Ant Mounds Frost Heave Hummocks Drainage Patterns (B10) Dry-Season Water Table (C2) Craylish Burrows (C8) Saturation Visible on Aerial Image Shallow Aquitard (D3) FAC-Neutral Test (D5) Geomorphic Position	
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Sierra Ecosystem Associates Preliminary Wetland Delineation

US Army Corp of Engineers

Draft - 07/31/2024 Appendix A

Western Mountains. Valleys and Coast Region

CUP24-0011 Kuhl
Exhibit N - Wetland Delineation Report

Michael Kuhl

Residential Structure Construction Project

Appendix B

Photographs from Data Collection









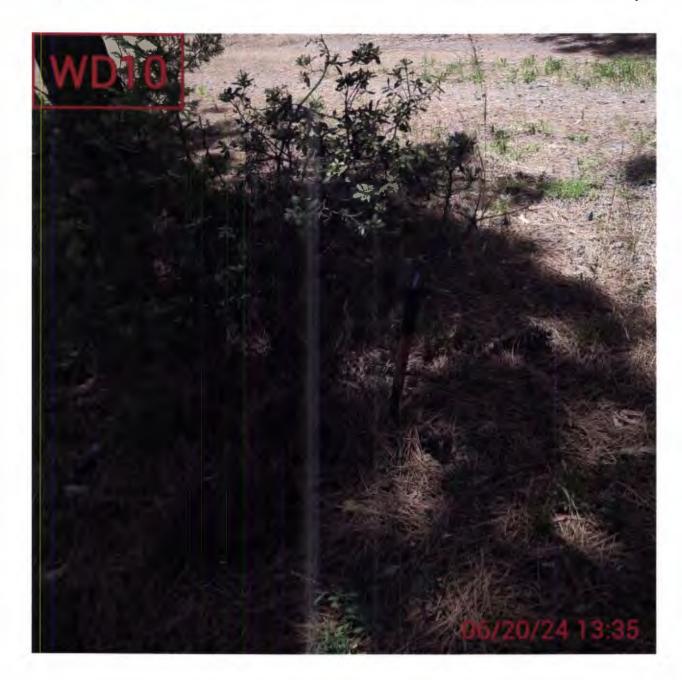












Michael Kuhl



